

**SUPERVISORS' PERCEPTIONS OF ORGANIZATIONAL EFFECTIVENESS:
A STUDY OF ACTUAL AND EXPECTED POWER DISTRIBUTION AND
BASES OF THE SUPERIORS' POWER UTILIZATION**

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By
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CERTIFICATE

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Kanpur
January 1979.

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SUPERVISORS' PERCEPTIONS OF ORGANIZATIONAL EFFECTIVENESS :
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SYNOPSIS

Power is a complex social phenomenon which has a pervasive influence on the functioning of an organization. Though power relationships are universally observed in organizational settings, they manifest themselves in various forms in different organizations. The most distinctive aspect of power structure in an organization is the way power is distributed over the different hierarchical levels. The problem of distribution of power is usually focussed upon the twin questions of participation and power equalization in the organization and their relative influence in determining organizational effectiveness. The distribution of power, that is, how much influence in the decision making is exerted by the different hierarchical levels, is closely associated with the expected distribution of power, that is, how much influence members expect different hierarchical levels to exert in the decision making process. In addition to the expectations of the members, the subordinates' perceptions of the source from which the superiors' influence is derived, further adds to the complexity of understanding organizational power.

The main aim of the present study was to investigate the actual and expected participation of all the hierarchical levels and the actual and expected power equalization at the lower levels in two organizations and their effects on the subjective and objective indices of organizational effectiveness. Alongside, the study was also concerned with the bases of the superior's use of power and how these were related to the supervisors' perceptions of organizational effectiveness.

The Control Graph Method, a measure of organizational control structure devised by Tannenbaum and Kahn (1957), was used to provide measures of two aspects of control: (a) participation, measured by the height of the control curve, and (b) power equalization, represented by the slope of the curve. Participation here, referred to the involvement of all the hierarchical echelons in the organizational decision making, while power-equalization implied a relatively greater involvement of the lower levels of hierarchy in the decision making process.

In a series of research studies employing the Control Graph Method, Tannenbaum (1968) observed the differential effects of participation and power-equalization aspects of power distribution on various indices of organizational effectiveness. Some of these studies (Tannenbaum, 1961; Smith and Tannenbaum, 1963; Zupanov and Tannenbaum, 1966; Bowers, 1964) also observed the discrepancies between the

actual and the expected power distribution (both participation and power equalization) and their effects on the criteria of organizational effectiveness. A few other studies (Bachman, Smith and Slesinger, 1966; Bachman, Bowers and Marcus, 1968) focussed on the relative efficacy of participation or power equalization, in conjunction with the bases of the superiors' exercise of power. These variables, though studied discretely, were not collectively considered for their effects on organizational effectiveness. Apparently, what was lacking in these studies was a **dynamic integration** of many facets of the power variables. The present study thus attempted to investigate the relative contribution of the actual distribution of power (both participation and power equalization), the expected power distribution and their interaction, along with the superior's use of position, expertise and personal likeability as sources of power, in determining the organizational effectiveness.

Organizational effectiveness, for the purpose of this study, was defined as the capacity of the organization to successfully cope with the resources for the accomplishment of the specified goals. Usually, organizations are characterized with multiple goals; some goals are necessary for the organizational survival while the others point to a long-term organizational health. Therefore, it was essential to include several aspects of organizational functioning while designing the measures of effectiveness. |

On the basis of the findings of available research, several hypotheses were formulated about the relationship between the power and the organizational effectiveness variables. The study focussed on testing these general hypotheses.

The data were obtained from Heads, Deputy Heads, and Supervisors (Total N = 121) of twelve subunits in two textile factories of a manufacturing organization in the private sector. The respondents filled out a set of questionnaires designed to measure the independent and dependent variables. The mean ratings of the Head's, Deputy Head's and Supervisor's influence were used for constructing the control graph of the actual and expected power distribution in the subunits. The twelve subunits were separately classified as high and low on the actual and expected participation (average height) as well as on the actual and expected power-equalization (slope). The experimental design consisted of a 2x2 classification of subunits high and low on the actual and expected participation as well as on the actual and expected power-equalization. Those subunits high or low on both the actual and expected dimensions were labelled as the congruent cells. The other two cells where the same classification conditions did not prevail, were called the incongruent cells. Scores of supervisors' perceptions of the superiors' exercise of position, expertise and personal likeability were also included as quantitative variates in the regression equation.

The measures of dependent variables were obtained from the scores of supervisors' (n=99) perceptions on an overall Organizational Effectiveness Scale consisting of seven subscales of effectiveness, viz., organizational identification, job involvement, organizational loyalty, subunit cooperation, trust-in-organization, job satisfaction and communication adequacy. A derived index of commitment was obtained by the summation of scores on identification, involvement and loyalty subscales.

In order to validate the findings from the subjective indices of effectiveness, two performance scores were obtained from the ratings of independent observers belonging to levels above the subunit hierarchy in the two organizations. The observer ratings were analyzed according to a 2 (high and low actual participation/power equalization) x 2 (high and low expected participation/power equalization) x 3 blocks (observers) randomized block design of ANOVA.

Using the regression analysis, the supervisory scores of effectiveness were treated as a linear function of the six power variables, namely, actual power distribution, expected power distribution, interaction of actual and expected power distribution, and the superiors' use of position, expert and referent power. The analysis was done separately for the participation and power equalization dimensions of actual and expected power distribution. The

results showed that the six power variables in the participation analysis, accounted for a significant amount of variance on the overall effectiveness ($p < .01$), identification ($p < .01$), trust-in-organization ($p < .01$), subunit cooperation ($p < .05$), and communication adequacy ($p < .05$). In the power equalization analysis also, the regression model accounted for a significant amount of variance on overall effectiveness ($p < .01$), identification ($p < .01$), trust-in-organization ($p < .01$), commitment ($p < .05$), subunit cooperation ($p < .05$) and job involvement ($p < .10$).

As expected, the findings showed that actual participation of members in the decision making was significantly related to the organizational identification ($p < .01$), commitment ($p < .10$) and trust-in-organization ($p < .10$). The interaction of the actual and expected participation was found significant on the variables of organizational identification ($p < .05$), loyalty ($p < .05$), trust-in-organization ($p < .05$), communication adequacy ($p < .01$), overall effectiveness ($p < .05$) and job satisfaction ($p < .10$). The findings of the 't' test revealed that the difference between the aggregated means of the congruent and incongruent cells was significant on the overall indices of effectiveness with the exception of job involvement scores. The analysis did not show any significant difference between the high and the low expected participation cells on any measure of effectiveness.

The analysis further revealed that the actual power equalization related significantly to the organizational identification ($p < .05$), trust-in-organization ($p < .05$) and overall effectiveness ($p < .10$). However, contrary to our hypothesis, the findings showed only nonsignificant-negative relationship between expected power equalization and effectiveness variables. The interaction of the actual and expected power equalization related significantly to job involvement ($p < .01$), job satisfaction ($p < .10$) and subunit cooperation ($p < .10$). The comparison of the congruent and the incongruent cells on the 't' test showed significant differences on the overall effectiveness ($p < .05$), commitment ($p < .05$), trust-in-organization ($p < .05$), organizational identification ($p < .10$), job satisfaction ($p < .10$) and communication adequacy ($p < .10$).

Position power, as expected, related negatively and significantly to trust-in-organization variable ($p < .05$) in the power-equalization analysis. In the participation analysis also, it was related negatively to trust-in-organization ($p < .10$). Expert power was positively and significantly related to trust-in-organization ($p < .05$) and organizational identification ($p < .10$) in both participation and power equalization analyses. In the participation analysis, as hypothesized, referent power related significantly to organizational identification ($p < .01$), overall effectiveness ($p < .01$), commitment ($p < .05$), subunit cooperation ($p < .05$),

trust-in-organization ($p < .10$), job satisfaction ($p < .10$) and communication adequacy ($p < .10$). In the power equalization analysis also, referent power related positively and significantly to organizational identification ($p < .01$), subunit cooperation ($p < .01$), overall effectiveness ($p < .01$), trust-in-organization ($p < .05$), commitment ($p < .05$), job satisfaction ($p < .05$), communication adequacy ($p < .05$), and organizational loyalty ($p < .10$).

The ANOVA of observer ratings validated the effects of the actual and the expected power equalization and their interaction on the quality of work ratings, but not on the quantity of work ratings. The findings also confirmed the interaction effect on the quantity of work ratings only. Furthermore, the comparisons of congruent and incongruent cells validated the findings on the quantity of work ratings in the participation analysis, and on both the quality and quantity of work ratings in the power equalization analysis.

The major findings of the study concerning the positive relationship between participation and effectiveness generally supported Tannenbaum's theory (1968) and the recent studies of Rosner (1973), Cooke and Tannenbaum (1976), and McMahon et al. (1973, 1976a). Moreover, the study also supported the contention (Bennis, 1966; Shepard, 1965; Strauss, 1963; Argyris, 1964; Miles, 1967) that a greater involvement of the lower levels of hierarchy related positively to the variables

of effectiveness, viz. organizational identification and trust-in-organization.. Most significantly, the study presented a stronger evidence for the identification of congruent conditions of the actual and expected power distribution (on both participation and power equalization dimensions) for organizational effectiveness. In the earlier studies, this aspect had not been possible to study because these studies considered the power variables discretely. Though the findings of Tannenbaum's studies (1968) had revealed the significance of discrepancies between the actual and expected amount and distribution of power, the present study gave a meaningful construction to it by associating it with other variables, e.g. bases of the superiors' exercise of power.

The findings of the present study revealed that among the various power variables, the superior's use of referent power was most strongly and consistently related to the indices of effectiveness in both participation and power equalization analyses. The results indicated that the superiors' exercise of personal likeability as means of power, gained all the more significance, particularly, at the subunit level of the organization where superior-subordinate interaction in the day-to-day functioning was unavoidable. It, therefore, appeared that the superiors' style of functioning through referent power was conducive to a larger spectrum of effectiveness variables than was the discrete presence of the participative or the power equalized

subunit structure. Findings also revealed that the trust-in-organization variable was related negatively to position power and positively to the superiors' exercise of expert power.

Of particular interest were the findings of the differential effects of the interaction between the actual and expected participation and the interaction between the actual and expected power equalization. The regression analysis of the participation and power equalization dimensions painted a remarkably different picture of the interaction between their actual and expected factors.

The findings of the study revealed that keeping the actual power distribution constant, the expected participation and expected power equalization may not go along together to account for the variations in the organizational effectiveness. It appeared that while members' expectations of participation are related to the organizational effectiveness, members' expectations of power equalization are not. It is not surprising that when the members expect a greater amount of influence to be exercised by the lower levels, they do not expect a corresponding increase in the amount of influence by the members of higher levels. These findings thus indicated that the zero-sum concept of power does not seem to hold true when members' expectations of the participation and the power equalization are considered.

This further leads to the formulation of a new hypothesis that the expected participation and expected power equalization are mutually exclusive while the actual participation and the actual power equalization are not.

The findings of the present study suggest the formulation of a contingency theory of organizational power. Further research is needed in the direction of measuring the 'best fit' between the variables of power in organizations and organizational effectiveness.

CHAPTER I

NATURE OF THE PROBLEM

Power is a complex social phenomenon which has a pervasive influence on the functioning of an organization. Though power relationships are universally observed in organizational settings, they manifest themselves in varied forms depending upon the organization and its setting. The most distinctive aspect of power structure in an organization is the way power is distributed over different hierarchical levels. But this question gets confounded by other conditions, such as, expectations about the exercise of influence by the members themselves. In addition to the expectations of members, the subordinates' perceptions of the source from which the superiors' influence is derived, further adds to the complexity of understanding organizational power.

Over the last several years, research in the area of organizational behaviour reached conflicting conclusions (Weber, 1947; Strauss, 1963; Tannenbaum, 1968; Emery and Trist, 1969; Argyris, 1964; Bennis, 1966; Shepard, 1965;

Likert, 1967; Mozina et al., 1970; Rosner, 1973; Cooke and Tannenbaum, 1976; Heller, 1971, 1977; McMahon and Perritt, 1973) regarding how power should be distributed along various hierarchical levels. Even the relationship between power distribution and organizational effectiveness has become a disputed issue (Weber, 1947; Gulick, 1937; Mooney, 1947; Urwick, 1944; Argyris, 1964; Shepard, 1965; Bennis, 1966; Tannenbaum, 1968; McMahon, 1976; Rosner, 1973; Cooke and Tannenbaum, 1976). Though these studies on power in organizations have generally tended to confine themselves to the investigation of the relationship between the amount of power exerted by the members at different hierarchical levels, there were a few studies that have investigated the congruence between power distribution and power expectation (Tannenbaum, 1961; Smith and Tannenbaum, 1963; Bowers, 1964; Zupanov and Tannenbaum, 1968), and the bases of influence used by the superiors (Bachman, Smith and Slesinger, 1966; Bachman, Bowers and Marcus, 1968, Raven and Kruglanski, 1970; Kipnis and Cosentino, 1969; Lord, 1977; Mowday, 1975, 1978) in relation to various indices of organizational effectiveness. However, none of these studies have considered the amount and distribution of power, the expectations of members about the amount and distribution of power, and the superiors' use of different means of exercising power collectively vis-a-vis the organizational effectiveness. Apparently, what was lacking

in these studies was a dynamic integration of the many facets of power in organizations to highlight further their importance for organizational effectiveness. The present investigation is designed to understand these issues pertaining to the study of power in organizations and how these power considerations influence organizational effectiveness.

I. BACKGROUND OF THE PROBLEM

A. Defining Power

Through common usage, the term power has become synonymous with influence, authority and control. However, for organizational theorists, such as, Dahl (1957), Katz and Kahn (1966), Heller (1971), there were certain differences in the conceptual meaning of these terms. Katz and Kahn (1966) defined influence as an interpersonal transaction which reflected some psychological or behavioural effects. Control was seen to be comprised of those influence attempts which reflected the intended effects of the influence agent. Power was defined as the capacity to exert influence while authority only represented a single type of power, i.e. legitimate power. More recently, Heller (1971) has distinguished between the terms power and influence. Heller (1971) suggested that when a person as

a result of his or her direct or indirect intervention had an access to the decision making process and could contribute his or her preferences to the decision making process, this was referred to as an exercise of influence. However, when his or her preferences were incorporated in the final outcome, this was operationally identified with the process of power.

Despite the various nuances of meanings ascribed to the terms associated with power, there appeared to be a substantial agreement among the researchers (Dahl, 1957; Etzioni, 1961; Tannenbaum, 1968; Hall, 1972) regarding the definition of power as a process of interpersonal influence where one individual, group, or organization induces another person, group, or organization to produce the intended behaviours. Tannenbaum (1968) explained this process of interpersonal influence as a cycle of events beginning with the intent of the influence agent A, followed by the influence attempt of person A addressed to another person B who then behaved according to person A's intent.

In essence, the definition of power described the influence relationships between at least two individuals. However, when discussed in the organizational context, then, "power must be viewed as more than merely interpersonal" (Hall, 1972, p. 206). The hierarchical levels in the organization are intertwined with the thread of

influence they wield. The members at different hierarchical positions exert different amount of power. Moreover, the structures of various subunits within an organization describe different patterns of hierarchical control. Also, one subunit may exercise its influence over another for the reason that it is performing a crucial function and because the relatively greater control it exercises over organizational resources (Crozier, 1964; Perrow, 1970; Zald, 1970). Thus, it was necessary to extend the definition of power from merely an interpersonal concept to subsume such important considerations as superior-subordinate relationships, patterns of hierarchical influence and control over the organization's resources.

B. Measuring Power

1. Common Measures of Power in Organizations:

Research data on power in organizations were often collected from the available official records regarding the structural characteristics of the organization, e.g. span of control, number of hierarchical levels, etc. Another way of collecting data on power in organizations was to ask the organizational members to identify the degree to which a particular level of management exercised influence in different areas. Thus, the structural indices of power were usually formulated for the requirements of a

particular conceptual scheme (Tannenbaum, 1968). In most cases, these indices represented the dominant view of top management leading to a neglect of views of the members at lower levels. Moreover, these measures were crude and imprecise (Evan, 1963). In contrast, survey questionnaires with precise rating scales could elicit the views of all the managerial levels and could be used in different organizational settings as well.

2. Specific Measures of Power Used in Research Studies:

In a review of indices of hierarchical power adopted for measurement in industrial organizations, Evan (1963) enumerated six measures of power. Three of these measures, namely, span of control, number of hierarchical levels, the ratio of administration to production personnel were used by Melman (1958), and the other three measures, namely, the hierarchical levels at which certain decisions were made, 'time-span of discretion' defined as the time limit allotted to an employee to make decisions on his own accord, and the limitations to the decision making authority of management were used by Jacques (1956). By and large, these measures were useful for a quick estimation of power and because this information could be easily obtained.

On the other hand, the measures using information provided by organizational members were also used in several

other studies. The questionnaire approach of measuring power was based on the assumption that the perceptions of organizational members also provided valid and reliable information. In a study of leadership styles and power-sharing among senior managers, Heller (1971) used a measure of power-sharing in decision making in terms of a scale called Influence-Power Continuum. On the basis of the managerial responses, the IPC scale identified six positions on a scale, i.e. personal decision without explanation, personal decision with explanation, prior consultation, joint decision making, short-span delegation and long-span delegation. The IPC scale was a useful device for measuring leadership styles through the sharing of influence with the subordinates, however, it did not provide any information about the amount and distribution of influence at different hierarchical levels.

Mulder (1976), on the other hand, conceptualized 'power distance' as a measure of power relationships between superiors and subordinates. Power distance was defined as a ratio of the extent to which the superior A in the organization determined the behaviour of subordinate B and the extent to which the subordinate B determined the behaviour of superior A. This measure of power relationships was named as 'power slope' by Blais (1974). As suggested by Mulder (1976), however, Hofstede (1976) preferred

to call it 'power distance'. Even though, this measure of power was useful for describing superior-subordinate relationships, it failed to depict an overall picture of organizational power.

Whisler, Meyer, Baum and Sorensen (1967) in a study, compared the use of three measures of centralization of power, namely, (i) individual compensation denoting individual control over the system output, (ii) the perceived interpersonal control, and (iii) the span of control. These researchers concluded that the desirability of each of these measures rested on three considerations, namely, (i) the control construct most relevant to the variables, (ii) the ease of use, and (iii) the research design.

(a) Description of the Control Graph Method:

Tannenbaum and Kahn (1957) devised a measure of control in organizations called the Control Graph Method. This measure was based on the averaged judgements of organizational members in response to the question "How much say or influence do the top, middle and lower management levels have" on a set of organizational activities. The control graph was constructed on the basis of respondent ratings with the abscissa representing levels of hierarchy and the ordinate describing the amount of influence. The average height and slope of the curve thus provided measures

of two aspects of control called the amount of total control and the distribution of control.

(b) Evaluation of Control Graph Method:

The increasing use of Control Graph Method for measuring organizational power can be attributed to some of its unique advantages. In a recent review of studies using Control Graph Method, Tannenbaum and Cooke (1978, p.2) enumerated the following advantages of this method:

- (i) The control graph with two continuous dimensions, namely, the levels of hierarchy and the amount of influences, was capable of describing a number of organizational types that in the past had been treated as discrete. The method thus provided an integrated way of conceptualizing organizational power structures, e.g. democracy, autocracy, and laissez faire. At the same time, the control curve could also account for other power structures that may exist any where on the two axes.
- (ii) The method provided a 'holistic' view of power in organizations and was unique in delineating an organization-level description of power - not a description of the individual leadership behaviour. Consistent with the systems view of organizations, the method conceived of leadership as a function of

distribution of power rather than in terms of the behaviour of leaders.

- (iii) The control graph indicated two distinct aspects of organizational power, namely, the amount of total control represented by the average height of the curve, and the distribution of control, represented by the slope of the curve. This distinction between the amount of total control and the distribution of control was completely ignored by other measures of power and control.

Even though the Control Graph Method has been acclaimed by and large, it was also criticized for certain weaknesses.

- (i) The method was criticized for simplifying a complex process of power in organizations and for making certain assumptions that were not validated, e.g., the assumption of equal interval scaling along its axes (Gundelach and Tetzschner, 1976; Patchen, 1963). It was further considered to be subjective and a perceptual measure rather than an objective and structural measure. Subjectivity of the measure was evidenced by the studies reporting differences in the perceptions of influence due to biases related to the position of members in the organization

and, therefore, the difference in their focus of control (Cooke and Tannenbaum, 1976).

- (ii) Though the criticism of subjectivity of the measure was valid, there is also some evidence (Malavia, 1977) showing that the members of different hierarchical levels do not differ in their perceptions of the influence. In a recent study of the perceptions of participation in textile mills in India, Malavia (1977) did not observe significant differences in the perceptions of influence between the departmental heads, the deputy heads and the junior personnel, on Vroom's (1959) measure of participation. The study concluded that the perception of participation was not totally subjective, but it was also rooted in the actual organizational situation. Thus, the criticism of subjectivity of responses does not seem to hold true for all situations. Nevertheless, it suggested caution in the control of the respondent-biases which could 'distort' the accurate estimation of power in organizations.
- (iii) Furthermore, the control graph was criticized as being a 'bound' method because it rested exclusively on survey questionnaire data. It is true that the studies employing control curves obtained their data

exclusively from the survey questionnaires, but it need not be assumed that the control graph approach was more method-bound than any other assessment technique. The information regarding the exercise of influence obtained through official records could also be used for control graph construction. However, so far, no attempt has been made in this regard.

The preference for employing survey data by researchers was primarily because it elicited information concerning the areas of influence of investigator's choice and secondly, because complete official records were seldom available for research purposes.

C. Various Aspects of Power in Organizations

1. Power Distribution:

Contemporary research in organizational behaviour has recognized an increasing concern for enhancing organizational effectiveness through greater distribution of power (Argyris, 1964; Bennis, 1966; Likert, 1967; Patchen, 1970; Tannenbaum, 1968; Juralewicz, 1974; McMahon and Perritt, 1973). The development of schools of organizational behaviour identified a shift in the emphasis among organizational theorists (Taylor, 1923; Roethlisberger and Dickson, 1939; Miles, 1965) from the concentration of power in the hands of a few at the top to the distribution

of power to the lower levels of management. The emerging system of 'human resource development' (Miles, 1965; Likert and Bowers, 1969) gave a further impetus to the democratization of work place and the decentralized system of organizational power structuring. Recent viewpoints expressed in the systematic thinking of 'organic management' (Burns and Stalker, 1961), 'team management' (Blake and Mouton, 1964), 'system four' (Likert, 1967), 'power equalization' (Leavitt, 1962; Strauss, 1963; Argyris, 1964) and 'participation in decision making process' (Davis, 1967; Lowin, 1968) were powerful expositions, signifying a movement from a centralized, bureaucratized exercise of power to the power equalized and participative systems of management.

(a) Studies on Participation and Organizational Effectiveness:

The studies (Davis, 1967; Lowin, 1968; Mohr, 1977) on participation and organizational effectiveness pointed to the desirability of involvement of all the hierarchical levels in the organizational decision making process. It was believed that such an involvement not only became a source of satisfaction, motivation and loyalty but also enhanced the amenability of members to accept controls (Tannenbaum and Kahn, 1957). A number of other authors have also suggested that the exercise of influence by all

the levels provided satisfaction of higher level needs of members (McGregor, 1960), increased their cooperativeness (Blake and Mouton, 1964), facilitated the psychological integration of the individual into the organization (Argyris, 1964; Lawrence and Lorsch, 1967), yielded advantages of a high degree of mutual interaction, trust and confidence (Likert, 1967) and mobilized an effective use of human resources (Miles, 1965).

Tannenbaum (1968), in a series of studies on organizational control, consistently observed that the participation as represented by the average height of the control curve, was positively correlated to the indices of organizational effectiveness. Specifically, the participation of all the hierarchical levels was related to satisfaction, commitment, member consensus and communication. Participation was also found to be positively related to the indices of productivity and profitability (Tannenbaum, 1968). Several other recent studies employing the Control Graph Method also presented a positive correlation between participation and various indices of organizational effectiveness (Hanna, 1972; Farris and Butterfield, 1972; Mozina et al., 1970; Rosner, 1973; Cooke and Tannenbaum, 1976; McMahon and Perritt, 1973; McMahon, 1976; Sorensen, 1976).

Most of the studies on participation, both laboratory and field studies, made an assumption that participation was

effective in practically all situations and that it always resulted in higher job satisfaction (Heller et al., 1977). However, some recent studies have tended to question this assumption. Studies conducted by Vroom (1964), Lischeron and Wall (1975), Payne, Fineman and Wall (1976), questioned the relationship between participation and job satisfaction. Heller, Lerenth, Koopman and Rus (1977) conducted a longitudinal study of the relationships between different degrees of influence and job satisfaction, skill utilization and organizational effectiveness. They concluded that the participation-effectiveness relationship was confounded by a number of intervening variables, such as, expectations of members, job constraints, established rules and group climate, etc.

(b) Studies on Power Equalization and Organizational Effectiveness:

Power equalization refers to that state in the organization where the members of the lower levels exercise more influence in the decision making process than the members of the higher levels. The degree of power equalization can be measured on a continuum ranging between two extremes termed as 'power equalization' and 'bureaucratization'. Thus, power equalized systems are identified with a relatively higher degree of influence exercised by the lower

levels while bureaucratized systems are attributed with a greater degree of influence by the higher levels of management.

A survey of literature related to organizations identified two clearly opposite theoretical arguments on the question of type of power distribution and its relationship with organizational effectiveness. According to the first position (Weber, 1947; Gulick, 1937; Mooney, 1947; Urwick, 1944), a greater degree of influence by the upper levels of management was considered essential, because it was the top management which was responsible for bringing conformity, coordination and unity of direction in the system. In contrast, the second position espoused that a greater distribution of power in the lower organizational levels was positively correlated with trust, commitment and the psychological integration of the individual in the organization (Leavitt, 1965; Strauss, 1963; Argyris, 1964; Bennis, 1966; Shepard, 1965).

In the recent years, the second position which prescribes a democratic organization, has found support among organizational behaviourists (Leavitt, 1965; Strauss, 1963; Adizes, 1971; Perrow, 1972; Mohr, 1977). The 'human resource development' theorists (Miles, 1965; Likert and Bowers, 1969) were particularly in favour of a more positive

distribution of power, suggesting a greater exercise of influence by persons close to the place of work. Tannenbaum's (1968) studies revealed that the slope of power distribution was positively associated with the subjective indices of organizational effectiveness. Some recent research findings (Hanna, 1972; McAfee, 1974; Cooke and Tannenbaum, 1976; McMahon and Perritt, 1973; McMahon, 1976), however, failed to observe any positive correlation between the slope of power distribution and the organizational effectiveness. These research studies tended to indicate that the power equalization was not an independent predictor of organizational effectiveness.

(c) Comparison of Participation and Power Equalization vis-a-vis Organizational Effectiveness:

A recent review of findings, obtained from a number of organizations in different countries (Tannenbaum and Cooke, 1978), revealed that participation was correlated with particular criteria of effectiveness, such as satisfaction, morale, communication, productivity, profitability and adaptability, in about half the number of studies. However, power equalization was associated with the criteria of effectiveness, such as, satisfaction and morale, less often than participation,

that is, in about one fourth of these studies. Objective criteria, such as, productivity, efficiency, profitability and adaptability were not related to power equalization. Ratings of organizational effectiveness by expert judges, from outside the units, were related to participation but not to power equalization.

2. Power Expectation:

(a) Members' Expectancies and Organizational Effectiveness:

Another consideration regarding power in organizations was the members' expectations of the amount and distribution of power. Kelly (1955) in his theory of personal constructs, observed that human behaviour is basically anticipatory and the fundamental postulate of his theory was that "a person's processes are psychologically channelized by the ways in which he anticipates events" (Kelly, 1955, p. 562). In the organizational context, members' behaviour in the organization is conditioned by the way they expected themselves to function. The organizational members also expect that the different hierarchical levels should exercise certain amount of influence. This expectancy not only channelized their own behaviour but also proved capable of eliciting expected behaviour from others (Rosenthal, 1969).

(b) Studies on Expected Participation and Expected Power Equalization:

Research in organizational behaviour so far has shown little concern about the expectations of members. Tannenbaum's studies (1968) were limited in their focus on the description of discrepancies between the 'actual' and 'expected' amount and the slope of the control curves. A review of these investigations (Tannenbaum, 1968) revealed that the managers reported a greater amount of expected participation than the actual participation in decision making. Similarly, the expected power equalization curve was more positive than the actual power equalization curve. Only one of the Tannenbaum's research studies (Tannenbaum, 1961) attempted to explore the correlation between expected participation and effectiveness and also between expected power equalization and effectiveness. This study revealed no correlation between the expected power distribution and effectiveness.

Haire, Ghiselli and Porter (1966) in a comparative study of managerial attitudes and behaviour in several countries, observed that high expectations of need fulfilment in the organization was a source of low need satisfaction among managers in the developing countries. Generalising from the conclusions of Haire, Ghiselli and Porter's study (1966), it can be argued that if the members

had unrealistically high expectations about the degree of participation and power equalization in the decision making process, then, these would influence their behaviour in the organization. Thus, these high expectations were likely to lead to dissatisfaction and lack of morale among organizational members. This argument leads one to suggest that the degree of expected participation and expected power equalization by themselves would be significant factors determining organizational effectiveness.

3. Congruence vs. Incongruence Between the Actual and Expected Factors of Participation and Power Equalization and Organizational Effectiveness:

Besides the relationship between the expected participation, expected power equalization and organizational effectiveness, a stronger predictor of organizational effectiveness was the congruence or incongruence between the actual and expected power distribution factors. It was observed that while the members expected a more participative management system, the organization showed little inclination for participative decision making or vice-versa. Similarly, when the members desired a democratized system of decision making, the organization was, in actuality, bending towards a bureaucratized decision making process. These discrepancies in the actual and expected aspects of participation and power equalization affected organizational functioning adversely.

There is some research evidence which shows that the organizational members differ in their perceptions of the 'actual' and the 'ideal' amount and distribution of power (Tannenbaum, 1961; Smith and Tannenbaum, 1963; Zupanov and Tannenbaum, 1968; Bowers, 1964). These research studies also revealed a negative correlation between the discrepancy between the actual and expected power distribution and the criteria of organizational effectiveness. In essence, the findings of all these studies indicated that the actual participation and expected participation, and also the actual power equalization and expected power equalization, interacted in the effective functioning of the organization.

D. Bases of Power Utilization

Bases of power utilization refer to the ways and means which superiors in the organization use to exercise their influence. The question "why subordinates in the organization comply to the requests of superiors" demonstrates the manner in which superiors exert power in the organization.

Superiors exercise their influence in various ways. They vary from the use of legitimate authority and dispensation of rewards and threats, to the use of power through expertise and personal likeability. The different

ways of power utilization are certainly aimed at the accomplishment of organizational tasks and organizational purposes. However, the distinctive effects of these power bases on organizational effectiveness vary with their use.

1. Studies of Classificatory Schemes of Bases of Power Utilization:

Although a number of schemes classifying the bases of power utilization have been put forward by different writers (Nowday, 1975; Tedeschi, Schlenker and Linkskold, 1972; Gamson, 1968; Gilman, 1962; French and Raven, 1959), there is little consensus on the typology of power bases. Gilman (1962), for instance, suggested four bases of exercising power, namely, (a) coercion, (b) authority, (c) persuasion, and (d) manipulation, that is, providing information in such a way that the recipient is not aware that he or she is being influenced. Similarly, Nowday (1975) classified five ways of superiors' exercise of power, namely, (a) threats, (b) legitimate authority, (c) rewards, (d) manipulation and (e) persuasion.

Among all the available classifications of bases of superiors' power utilization, the one put forward by French and Raven (1959) is the most comprehensive and the one that is most commonly used. French and Raven (1959,

p. 612-613) categorized the following five bases of power which a power agent O can exercise over another person P:

- (a) Reward power, based on P's perception that O has the ability to mediate rewards for him.
- (b) Coercive power, based on the perception by P that O has the ability to mediate punishments for him.
- (c) Legitimate power, based on P's perception that O has the legitimate right to prescribe behaviour for him.
- (d) Expert power, based on the perception by P that O has some special knowledge or expertise.
- (e) Referent power, based on P's identification with O.

This framework represents a useful approach for studying superiors' use of power over subordinates. However, there appear to be some overlaps among the reward, coercive and legitimate power categories. Since the dispensation of rewards and punishments as well as the legitimate authority are vested in the manager's position, these three categories of power bases can be assimilated into a more comprehensive heading of position power. Thus, for purposes of parsimony, it is more expedient to consider three main bases of the superiors' power utilization, namely, position, expert and referent power respectively.

2. Studies of Bases of Superiors' Exercise of Power and Organizational Effectiveness:

Several attempts have been made to delineate the distinctive effects of superiors' exercise of various bases

of power on different aspects of organizational effectiveness (Bachman, Smith and Slesinger, 1966; Bachman, Bowers and Marcus, 1968; Raven and Kruglanski, 1970; Patchen, 1974; Kipnis and Cosentino, 1969; Filley and Grimes, 1967; French, Morrison and Levinger, 1960; Mowday, 1975, 1978; Lord, 1977). However, there was no study that considered the superiors' use of power, in conjunction with both power expectation as well as power distribution, as a significant predictor of organizational effectiveness.

Bachman, Smith and Slesinger (1966), for instance, in a study of sales managers observed that legitimate power was the most important basis of power and was negatively related to job satisfaction and performance. Expert power was the second most important basis of power followed by the referent power. Both expert and referent powers were positively related to a high degree of participation and also to a high level of job satisfaction and performance. Exercising influence through rewards and coercion was considered to be the least important basis of power and understandably was related negatively to job satisfaction and performance criteria.

In a comparative study of the bases of power in five organizational settings, Bachman, Bowers and Marcus (1968) found that the legitimate and expert types of power were

considered the most important, while the referent and reward powers were of intermediate importance, and the use of coercion proved to be of least importance. Both expert as well as referent powers were positively related to the criteria of organizational effectiveness. Contrary to this, the use of coercion was related negatively to effectiveness, while both reward power as well as legitimate power were unrelated to organizational effectiveness.

In a recent study, Lord (1977) analyzed leadership perceptions as a function of five sources of power and explained the significant amount of variance in leadership ratings, preferences and effectiveness. It was found that expert, legitimate and coercive power were the significant predictors contributing to leadership effectiveness. Expert and coercive power along with the reward power emerged as the significant predictors of leadership ratings, while the referent and expert power together with legitimate power accounted for the significance in leadership preferences.

Mowday (1978), in a very recent study of school principals, observed the differential use of threats, legitimate authority, persuasion, rewards and manipulation as bases of influence among principals rated high, medium and low on effectiveness. The study demonstrated that the

use of manipulation most consistently differentiated between principals rated as high and low on effectiveness. The study also showed that highly effective principals used manipulation more frequently than those rated as medium and low on effectiveness. Principals of medium effectiveness presented greater use of rewards than those principals classified as high or low on effectiveness.

There were some other studies (Hickson et al., 1971; Salancik and Pfeffer, 1974, 1977) that revealed how individuals and groups differ in accomplishing their goals in organizational decision making by exercising a particular type of influence. Thus almost all investigators have ignored the relationship of the bases of superiors' exercise of power and the several aspects of organizational effectiveness such as trust-in-organization, organizational identification, cooperation and communication.

II. ORGANIZATIONAL EFFECTIVENESS

The concept of organizational effectiveness has been a topic of discussion ever since the beginning of the organization theory. A growing interest in the concept is amply evidenced through the availability of various models of organizational effectiveness that have emerged to provide rationale to organizational theory and behaviour.

However, there is relatively little consensus on the defining characteristics of organizational effectiveness and its operational dimensions.

A Problems of Theory and Measurement

The various models of effectiveness have either followed the 'goal approach' in the fashion of Georgopolous and Tannenbaum (1957), Price (1968), Perrow (1961), Etzioni (1964), or the 'system resources model' as was done by Katz and Kahn (1966), Yuchtman and Seashore (1967). The 'goal approach' (Georgopolous and Tannenbaum, 1957) placed greater emphasis on a few ultimate criteria of effectiveness, e.g. productivity, absence of strain, and flexibility, and therefore, the approach was labelled as 'static'. On the contrary the 'system resources model' (Yuchtman and Seashore, 1967) stressed greater interaction between organization and environment, and thus the model was called 'dynamic'. However, both models were criticized for subscribing to the ultimate criterion of organizational effectiveness (Hall, 1972; Price, 1972).

Recent researches in organizational behaviour have revealed an increasing recognition of the multivariate models of organizational effectiveness (Lawrence and Lorsch, 1967; Yuchtman and Seashore, 1967; Friedlander and Pickle, 1968; Mahoney and Wietzel, 1969; Mott, 1972;

Duncan, 1973; Megandhi and Reimann, 1973; Child, 1975). There was some agreement that the evaluative criteria of effectiveness were unique and specific to a particular organization and closely associated with the values and ethos of the particular organizational setting (Steers, 1975). Accepting the systems perspective of organizations, there were further problems of criterion generalizability from one organization to another. Besides the problem of criterion generalizability, time perspective was also an important consideration in selecting stable criteria of organizational effectiveness. Steers' (1975) review of the multivariate models of organizational effectiveness pointed out that the criteria of effectiveness were different for macro-level and micro-level analyses. Thus, for measuring the effectiveness of individuals, subunits and organizations, different criteria have to be specified. Therefore, it was appropriate to define organizational effectiveness in terms of the capacity of the organization to successfully cope with its resources for the accomplishment of specified goals (Etzioni, 1960).

B. Criteria of Organizational Effectiveness

Research studies dealing with the relationship between power in organizations and organizational effectiveness have used several criteria of effectiveness. These criteria were

generally categorized as: (1) subjective indices, based on the perceptions of organizational members, and (2) objective indices, based on the 'hard core' facts about the organizational functioning.

1. Subjective Criteria:

The subjective indices of organizational effectiveness included perceptions of job satisfaction by its members (Bowers, 1964; Bachman, Smith and Slesinger, 1966; Rosner, 1973; Cooke and Tannenbaum, 1976; McMahon and Perritt, 1973), loyalty (Tannenbaum, 1961; Tannenbaum and Kahn, 1957), identification with the plant (Rosner, 1973; Cooke and Tannenbaum, 1976), morale (Pennings, 1973; Smith and Tannenbaum, 1963), trust in management (Rosner, 1973), innovativeness in educational institutions (Hanna, 1972; McAfee, 1974), and communication adequacy (Rosner, 1973; McMahon and Ivancevich, 1976), etc. The most significant aspect of the subjective indices was the freedom with which the investigator could explore the perceptions of respondents on areas which he deemed fit for the organizational functioning. Like any subjective criteria, these indices were also open to criticism on the basis of the response set of the respondents, in addition to a lack of validity with the external sources.

2. Objective Indices:

Studies on power and organizational effectiveness used several objective criteria of organizational effectiveness such as measures of quality and quantity of product (Patchen, Seashore and Eckerman, 1961; Bachman, Smith and Slesinger, 1966; Pennings, 1973; Kavcic, 1968; Lawrence and Lorsch, 1967), costs and profitability (Yuchtman, 1968; Mozina, et al. 1970; Rosner, 1973; Lawrence and Lorsch, 1967), etc. These studies obtained data on productivity and profitability from the company records. Since the official records of productivity and profitability are not generally available to an independent investigator, and when available, the accuracy of the official figures presented drawbacks of other kinds, rendering them less reliable than anticipated. However, in some other studies (Tannenbaum, 1961; Bowers, 1964; Hanna, 1972; McAfee, 1974; McMahon and Ivancevich, 1976) performance ratings of the organization from outside experts were also used. However, observer ratings were also difficult to obtain because of the nonavailability of competent judges.

It is thus more appropriate to include the subjective and the objective indices, both collectively representing a wide variety of human fulfilment and task accomplishment (Friedlander and Brown, 1974), for a reliable approximation of organizational effectiveness.

III. STATEMENT OF THE PROBLEM

A. Focus of the Problem

Generally, this study concerned itself with organizational power, its distribution and bases, and effectiveness. The study thus set out to investigate the effects of the amount of participation of all levels of subunit hierarchy and the degree of power equalization on the functioning of the subunit. Expectations of members about participation and power equalization were also considered important determinants of the subunit functioning. On the basis of previous studies, it was assumed that the actual and expected aspects of participation and power equalization factors would account for the variation in the behaviour of the subunit. Alongside the actual and expected power distribution, bases of the superiors' power utilization were also regarded as potential predictors of organizational effectiveness.

The study thus examined the independent and joint effects of the actual and expected participation and power equalization, and the superiors' style of exerting power on both the subjective and the objective indices of organizational effectiveness.

1. Independent Variables:

The study was designed to analyze the supervisors' perceptions of organizational functioning as a linear function

of the six power variables, namely, actual power distribution, expected power distribution, interaction of actual and expected factors of power distribution, and the superiors' exercise of power through position, expertise and personal likeability (referent power). Actual and expected power distribution aspects were considered as qualitative classification factors and the interaction term represented a product of actual and expected dimensions. But the bases of power, i.e. position, expert and referent powers were regarded as quantitative variates in the regression equations. The classification of actual and expected factors was done according to a 2 (high and low actual factors) x 2 (high and low expected factors) design.

2. Dependent Variables:

Supervisors' perceptions were used as measures of subjective aspects of effectiveness. Perceptions of supervisors were obtained on an Overall Organizational Effectiveness Scale which consisted of seven subscales, namely, organizational identification, job involvement, organizational loyalty, subunit cooperation, trust-in-organization, job satisfaction and communication adequacy. A derived measure of commitment to organization was also used. Commitment was represented by identification,

involvement and loyalty subscales, which denoted the cognitive, conative and affective aspects of commitment respectively, as suggested by Buchanan (1974).

For validation of the findings of the subjective indices, ratings of the independent observers, positioned above the subunit level, were used as measures of subunit performance. The observer ratings were obtained for (1) quality of work and (2) quantity of work in the subunits.

3. Control of Variables:

The two organizations, belonging to one private business house were chosen to keep the variables such as company policies and top management culture constant. Moreover, the technology of the two organizations was also similar obviating its confounding effects on other organizational functions.

The hierarchical level as a factor was controlled by considering only the supervisors' perceptions of organizational effectiveness and the superiors' use of position, expert and referent powers. The response biases of the respondents' perceptions of power were controlled by preliminary checks of consistency among the responses of the members of different hierarchical levels.

B. Hypotheses

On the basis of available research evidence regarding the relationship between the variables of power and organizational effectiveness, the following hypotheses were formulated:

1. Participation:

- a) The greater the amount of actual participation, the higher the scores on overall organizational effectiveness and its subscales.
- b) The greater the amount of expected participation, the lower the scores on overall organizational effectiveness and its subscales.
- c) The greater the congruence between actual and expected participation, the higher the scores on overall organizational effectiveness and its subscales.

2. Power Equalization :

- a) The greater the degree of actual power equalization, the higher the scores on overall organizational effectiveness and its subscales.
- b) The greater the degree of expected power equalization, the lower the scores on overall organizational effectiveness and its subscales.
- c) The greater the congruence between actual and expected power equalization, the higher the scores on overall organizational effectiveness and its subscales.

3. Bases of the Superiors' Power Utilization:

- a) The greater the use of superiors' position power, the lower the scores on overall organizational effectiveness and its subscales.

- b) The greater the use of superiors' expert power, the higher the scores on overall organizational effectiveness and its subscales.
- c) The greater the use of superiors' referent power, the higher the scores on overall organizational effectiveness and its subscales.

Although, no hypotheses were formulated for the observer ratings of the quality and quantity of work in the subunits, it was expected that the observer ratings would confirm the findings of the subjective indices.

Chapter 2

METHOD

The data for this research were collected from the factory settings in which the subjects were working. Two industrial plants were selected as sites of the study. The plants, located in two different states, belonged to a private business house in India. The main aim of selecting these plants was to keep the influence of factors such as company policies, technology and top management culture as uniform as possible for the two factories. The two plants represented one of the largest and more successful ventures of this business house. Among the Indian textile industries in the private sector, these two plants were generally regarded as large in terms of employment and successful in terms of annual profits.

A. Sample

The sample from both the factories consisted of one hundred and thirty five male respondents (Heads, Deputy Heads and Supervisors of fourteen subunits). One of these factories specialized in the production of synthetic fabrics and the other in woollen fabrics. In the synthetics plant, eight subunits were included, namely, polymerization

spinning, stretching, texturising, coning, dyeing, packing and production maintenance, and in the woollen plant, six subunits were included, viz. wool combing, wool dyeing, spinning, weaving, finishing, and fabric dyeing. The data from the eight respondents of two subunits, namely, packing of the synthetic plant and wool dyeing of the woollen plant, were later excluded from analysis because these two subunits did not have sufficient number of respondents. Six other respondents were also excluded from the study as their response data were found incomplete.

In the final analysis, the sample consisted of one hundred and twenty one respondents (total N = 121) belonging to the twelve subunits. The respondents included nine Heads, thirteen Deputy Heads and ninety nine Supervisors. There was more than one Deputy Head in some of the subunits. Although an attempt was made to contact all the Heads, Deputy Heads and Supervisors, three Heads, seven Deputy Heads, and twenty Supervisors were not available due to their absence from the subunits at the time the study was conducted.

The distribution of age, years of service in the present organization and total work experience, for the Heads, Deputy Heads and Supervisors is presented in Table 1.

Table 1 -- Means and SDs of the age, years of service in the present organization, total work experience for Heads, Deputy Heads and Supervisors.

Hierarchical levels	N	Age in years		Years of service in the present organization		Total work experience	
		M	SD	M	SD	M	SD
Heads	9	40.22	3.93	13.44	6.19	16.44	4.54
Deputy Heads	13	35.23	6.45	10.92	5.39	12.00	6.37
Supervisors	99	29.48	7.39	8.45	2.76	9.71	1.64

All respondents were primarily textile engineers with a college degree or diploma in science or textile technology.

B. Measures

1. Power Distribution Questionnaire (Appendix 1):

Distribution of power within a subunit was measured by using Tannenbaum's Control Graph Method. Information was collected on respondents' views on how much say or influence, they thought, members of different hierarchical levels exerted on a set of activities. The respondents gave their ratings on a five point scale for each of these activities. The mean ratings of influence for each level as provided by the respondents were plotted against the hierarchical levels. This curve provided measures of two aspects of power distribution: (a) actual participation, and

(b) actual power equalization. Participation was measured by the average height of the curve and power equalization was measured by the slope of the curve.

2. Power Expectation Questionnaire (Appendix 2):

Subunit power expectation was measured through the Power Expectation Questionnaire. This questionnaire elicited information from the respondents regarding how much say or influence, they expected, people at different hierarchical levels in the subunit should exert on a set of activities. The format and scoring system for this questionnaire was the same as in the Power Distribution Questionnaire. The power expectation curve obtained from the mean ratings of influence for various levels provided measures of: (a) expected participation, and (b) expected power equalization.

3. Bases of Power Utilization Questionnaire (Appendix 3):

This questionnaire identified the source from which the superiors derived their power in the organization. The questionnaire consisted of twelve items representing position power, expert power and referent power. It was a modified version of French and Raven's (1959) measure of the bases of social power. The respondents gave their ratings on a five point scale for each of these items. The summated

ratings of the four items of position, expert and referent powers provided scores on the three sources of the superiors' power utilization.

4. Overall Organizational Effectiveness Scale
(Appendix 4) :

The Overall Organizational Effectiveness Scale consisted of seven subscales of organizational effectiveness with a total of thirty six items. The Overall Effectiveness Index was obtained through the summed scores of the following seven effectiveness subscales. The aggregated ratings of responses on a five point scale provided the scores for each of these subscales.

(a) Organizational Identification Subscale (Appendix 4a):

Four items were adapted from Hall, Schneider and Nygren's (1970) six-item Organizational Identification scale. These items were concerned with respondent's sense of belonging, pride-in-work, identification with organizational problems and identification with organizational goals.

(b) Job Involvement Subscale (Appendix 4b):

Six items were adapted from Lodahl and Kejner's (1965) twenty one-item Job Involvement scale. The items were concerned with the self-esteem in performance and self-image components of job involvement.

(c) Organizational Loyalty Subscale (Appendix 4c):

Four items were used to measure employee's sense of obligation and affective attachment to the organization.

(d) Subunit Cooperation Subscale (Appendix 4a):

Cooperation within subunit was measured on a set of activities given in six items.

(e) Trust-in-Organization Subscale (Appendix 4e):

This scale consisted of five statements specifically developed to measure employee's trust-in-organization. The statements were concerned with consistency between verbal profession and action, informal communication, subordinate trustworthiness, superiors' redemption of his promises and management's honouring its assurances.

(f) Job Satisfaction Subscale (Appendix 4f):

Seven items were adapted from Brayfield and Rothe's (1951) eighteen-item Job Satisfaction Scale. This measure provided an index of global satisfaction with job.

(g) Communication Adequacy Subscale (Appendix 4g):

Four statements were developed to measure four different aspects of communication in organizations. These items were concerned with accuracy, feedback, overload and lack of information flow.

5. Subunit Performance Rating Scale (Appendix 5):

This scale provided performance ratings of subunits in the two factories. The ratings were obtained from six independent observers (three from each organization) who were deemed competent to evaluate the performance of the subunits of their organizations. All six observers held managerial positions above the Heads of the subunits.

The scale contained two major areas of assessment. The observers were required to give their assessment of subunit performance on the quality and the quantity of work.

C. Procedure

Before the psychological questionnaires were prepared for final testing, a pilot study was conducted locally in a cotton textile mill to test their general utility.

The two organizations selected for the study were free from labour unrest at the time of entry. The investigator's entry to the subunits was facilitated by an introductory letter from the General Manager circulated to all subunits. The investigator first approached the Heads of the subunits and then contacted the Deputy Heads and the Supervisors personally.

The purpose of the study was described in rather general terms of attitude survey. The respondents were assured of confidentiality and anonymity of their responses.

The questionnaire booklets were given to the members of the subunit staff individually by the investigator. The booklet contained measures of independent and dependent variables arranged in a counter-balanced order. To answer the questions, the respondents were asked to follow instructions given separately for each of the measures. In addition,

the information was also sought on some salient biographical facts including age, educational qualification, years of service in the present organization, total work experience, position or rank at the time of entry and position or rank currently held. The respondent was able to complete the questionnaire between 30-45 minutes. In all, 25 days were spent in each organization to complete the collection of data.

A few days after the first contact, when the completed questionnaires were collected, the investigator had a brief session with the respondent again to explain the purpose of the study and to allay any fears that they may have had about giving this information.

Later, the observer ratings of performance were obtained from the Mill Manager, Works Manager and Production Manager of the first organization and from the Works Director, Works Manager and Assistant Works Manager of the second organization.

Chapter 3

RESULTS

Before analyzing the data to test hypotheses, data obtained from the respondents were checked for the reliability of measures and analyzed to identify subunits high and low on actual and expected participation and also on actual and expected power equalization. The subjective indices of organizational effectiveness were, then, treated as a linear function of the power variables using the multiple regression analysis. Subsequently, observer ratings of subunits performance were analyzed through a two factor randomized block design of ANOVA.

I. RELIABILITY OF MEASURES

A. Comparison of the Ratings of Heads, Deputy Heads and Supervisors

1. Power Distribution Questionnaire:

As a precautionary measure, to check for any biases in perceptions of members of the three hierarchical levels, the scores obtained on the Power Distribution Questionnaire were compared with each other for consistency among their ratings. The differences in the ratings of respondents

belonging to different levels were analyzed using the 't' test. Thus, three 't' tests were performed separately for the amount of influence exercised by the members of three hierarchical levels.

Table 2 presents results of the analysis. It was observed that none of the 't' values were significant. It suggested that perceptions of respondents were not biased toward any hierarchical level, but were shared by the members of higher levels in the existing climate.

2. Power Expectation Questionnaire:

The scores on the Power Expectation Questionnaire were analyzed in the same manner as mentioned above for the Power Distribution Questionnaire scores. The results (Table 3) revealed that none of the nine 't' values were significant, thus again suggesting a high degree of consistency among the members of three hierarchical levels.

B. Reliability of Organizational Effectiveness Subscales

1. Alpha Coefficients of the Organizational Effectiveness Subscales:

Cronbach's (1951) alpha coefficient testing the consistency of the item variance and the test variance, was computed for each of the seven organizational effectiveness subscales. Table 4 presents the alpha coefficients and the

Table 2 - Means, SDs and 't' values of the differences between respondents placed at three different levels (Power Distribution Questionnaire).

	Heads' Influence			Deputy Heads' Influence			Supervisors' Influence		
	M	SD	t	M	SD	t	M	SD	t
Heads' Ratings	12.00	2.11		11.11	2.61		8.57	3.12	
Deputy Heads' Ratings	12.55	2.38	0.09	12.77	2.29	0.30	9.00	2.08	0.08
Heads' Ratings	12.00	2.11		11.11	2.81		8.57	3.12	
Supervisors' Ratings	12.68	2.35	0.10	11.46	3.17	0.08	9.99	3.64	0.36
Deputy Heads' Ratings	12.55	2.38		12.77	2.29		9.00	2.88	
Supervisors' Ratings	12.68	2.35	0.05	11.46	3.17	0.36	9.99	3.64	0.32

Table 3 - Means, SDs and 't' values of the differences between the ratings of respondents placed at three levels on the Power Expectation Questionnaire

	Heads' Influence			Deputy Heads' Influence			Supervisors' Influence		
	M	SD	't'	M	SD	't'	M	SD	't'
Heads' Ratings	12.78	2.08		12.78	1.45		9.67	2.65	
Deputy Heads' Ratings	12.77	2.32	.001	13.55	1.50	.13	10.09	2.56	.09
Heads' Ratings	12.78	2.08		12.78	1.45		9.67	2.65	
Supervisors' Ratings	12.87	2.46	.02	12.80	5.38	.01	10.88	2.99	.51
Deputy Heads' Ratings	12.77	2.32		13.55	1.50		10.09	2.56	
Supervisors' Ratings	12.87	2.46	.02	12.80	5.58	.18	10.88	2.99	.24

number of items in the subscales. The analysis revealed that the reliability of the subscales was moderately high. The mean alpha coefficient of the seven subscales was ($\alpha = 0.67$).

Table 4 - Alpha coefficients and the number of items in the seven effectiveness subscales.

	Organizational Effectiveness Subscales	Number of items	Alpha Coefficients
1	Organizational Identification	4	.83
2	Job Involvement	6	.58
3	Organizational Loyalty	4	.72
4	Subunit Cooperation	6	.86
5	Trust-in-Organization	5	.72
6	Job Satisfaction	7	.55
7	Communication Adequacy	4	.42

2. Correlations Between Organizational Effectiveness Subscales:

Product-moment correlations between the seven subscales of organizational effectiveness were also computed from the supervisors' ratings. Table 5 displays the intercorrelations among the subscales. The findings suggested moderate intercorrelations among the subscales.

Table 5 - Intercorrelations among the seven organizational effectiveness subscales.

Effectiveness Subscales	1	2	3	4	5	6	7
1 Organizational Identification	1.00						
2 Job Involvement	.49	1.00					
3 Organizational Loyalty	.56	.37	1.00				
4 Subunit Cooperation	.41	.17	.44	1.00			
5 Trust-in-Organization	.60	.29	.39	.44	1.00		
6 Job Satisfaction	.44	.35	.46	.37	.42	1.00	
7 Communication Adequacy	.39	.20	.24	.36	.39	.33	1.00

This finding justified the use of a derived score of overall effectiveness as the sum of ratings of the seven subscales. Moreover, the availability of high intercorrelations between organizational identification, job involvement and organizational loyalty subscales also justified the use of a derived score of commitment as the sum of ratings on these three subscales.

II. CLASSIFICATION OF SUBUNITS AS 'HIGH' AND 'LOW' ON ACTUAL AND EXPECTED POWER DISTRIBUTION

A. Participation (Average Height of the Control Curve)

The average heights of the actual and expected power distribution curves were computed for classifying subunits

as high and low on the participation dimension. The mean of the three points, representing the amount of total influence exercised by the three levels of subunit hierarchy, provided the average height index. Accordingly, the twelve subunits were ranked for the average height of the actual and the expected power distribution curves. The rankings were then dichotomized into high and low on the basis of the median rank and the subunits were placed in the appropriate cells in a 2 x 2 design as shown in Fig. 1.

The number of subunits as well as the number of observations in each cell were unequal. The cells comprising of subunits either high or low on both the actual and the expected participation were labelled as congruent cells. On the contrary, the cells representing subunits with low actual-high expected participation or high actual-low expected participation were called as incongruent cells. Thus, cells 1 and 4 were categorized as congruent whereas cells 2 and 3 were categorized as incongruent.

B. Power Equalization (Slope of the Control Curve)

In order to classify subunits as high and low on the actual and the expected power equalization dimensions, the slopes of the actual and expected control curves of subunits were obtained by computing the beta-coefficients. The rankings of the beta-coefficients of the actual and

ACTUAL PARTICIPATION

	High		Low	
	Cell 1	Cell 2	Cell 3	Cell 4
EXPECTED PARTICIPATION	Subunit Codes	Subunit Codes	Subunit Codes	Subunit Codes
	04, 05, 06, 08, 10	01, 11	09, 12	02, 03, 07
	Number of observations	Number of observations	Number of observations	Number of observations
	$n_1 = 39$	$n_2 = 15$	$n_3 = 16$	$n_4 = 29$
				$n_{1,2} = 54$
				$n_{3,4} = 45$
				$n_{1,3} = 55$
				$n_{2,4} = 44$
				$N = 99$

Fig. 1. Classification of subunits as High and Low on the Actual and Expected Participation Dimensions.

expected power equalization were dichotomized into high and low on the basis of the median rank and the subunits were placed in the appropriate cells of a 2 x 2 design as displayed in Fig. 2.

The four cells in Fig. 2 though presenting equal number of subunits, became unequal in the number of observations in each cell. As in the participation analysis, cells 1 and 4 being high and low on both the actual and expected power equalization, respectively, were categorized as congruent cells. Cells 2 and 3 representing the low actual-high expected power equalization and the high actual-low expected power equalization subunits, respectively, were labelled as incongruent cells.

C Correlation Between Participation (Average Height) and Power Equalization (Slope) Dimensions

Rankings of average heights and slopes of actual power distribution curves of subunits were correlated with each other. The analysis revealed the absence of any correlation between the average heights and the slopes of actual power distribution curves ($\rho = -.07$). Similarly, rank-order correlation was also computed between the average heights and slopes of the expected power distribution curves of the 12 subunits. The results showed that the average heights and slopes of the expected power distribution curves were uncorrelated ($\rho = -.04$).

ACTUAL POWER EQUALIZATION

	High		Low	
	Cell 1		Cell 2	
High	Subunit Codes		Subunit Codes	
	06, 08, 12		02, 05, 07	
	Number of observations		Number of observations	
	$n_1 = 23$		$n_2 = 26$	
Expected Power Equaliza- tion				
	Cell 3		Cell 4	
	Subunit Codes		Subunit Codes	
	09, 10, 11		01, 03, 04	
Low	Number of observations		Number of observations	
	$n_3 = 19$		$n_4 = 31$	
	$n_{1,3} = 42$		$n_{2,4} = 57$	
				$n_{1,2} = 49$
				$n_{3,4} = 50$
				$N = 99$

Fig. 2. Classification of subunits as High and Low on the Actual and Expected Power Equalization Dimensions.

III. REGRESSION ANALYSIS

The multiple regression analysis was used to test the effects of organizational power variables on the supervisors' perceptions of organizational effectiveness. The regression analysis was considered useful because it served the dual purpose of hypothesis testing and prediction. Thus, the scores of supervisors' perceptions of overall effectiveness and its subscales were analyzed as a linear function of the six variables of power, namely, the actual power distribution, the expected power distribution, the interaction of the actual and expected factors and the superiors' use of position, expert and referent powers. The actual and expected power distribution were treated as qualitative classification variables and the position, expert and referent power, were the quantitative variates. Thus, the following regression model was used:

$$Y_{ijk} = C + \alpha_i + \beta_j + \alpha\beta_{ij} + B_1X_1 + B_2X_2 + B_3X_3 + \epsilon_{ijk};$$

$$i = 1, 2; j = 1, 2; k = 1, n.$$

where Y_{ijk} was the score of supervisor's perception on overall effectiveness and its subscales; C was the constant term; α_i represented the two levels of actual power distribution (high and low); β_j represented the two levels of expected power distribution (high and low); $\alpha\beta_{ij}$ was the

interaction of α_i and β_j ; B_1X_1 , B_2X_2 and B_3X_3 represented the weighted factors of position, expert and referent power, respectively; and ϵ_{ijk} was the random error term. Since the variables of actual and expected power distribution were measured separately on participation and power equalization dimensions, two separate regression analyses were conducted for the overall organizational effectiveness and the subscale scores.

A. Participation Analysis

1. Amount of Variance of the Effectiveness Indices:

The results of regression analysis are displayed in table 6. It was observed that the R^2 for different organizational effectiveness measures ranged between .06 to .52. The power variables accounted for 25% variance in the overall effectiveness scores. The results also revealed 32% variance in the organizational identification, and 26% variance in the trust-in-organization scores. This was followed by 16%, 15%, 14%, 10%, 7% and 6% variance in the commitment, subunit cooperation, communication adequacy, job satisfaction, organizational loyalty and job involvement scores, respectively.

Table 6 - t, F² and F values of the regression of effectiveness indices on actual participation, expected participation, interaction term (actual & expected), position power, expert power and referent power.

Independent variables	Actual participation		Expected participation		Interaction (Actual & expected)		Position power		Expert power		Referent power		F
	t	###	t	###	t	###	t	###	t	###	t	###	
Organizational Identification	2.61	###	.77	2.14	.33	###	.33	###	1.39	###	5.00	###	.32 7.49
Job Involvement	.57	###	.60	1.24	-.88	###	-.88	###	.07	###	.91	###	.06 .99
Organizational Loyalty	1.18	###	-.25	1.94	1.10	###	1.10	###	-.14	###	.95	###	.07 1.23
Commitment	1.58	###	.94	1.27	.13	###	.13	###	.66	###	1.92	###	.16 2.92
Subunit Cooperation	.37	###	.91	1.09	.82	###	.82	###	.77	###	1.80	###	.15 2.67
Trust-in-Organization	1.43	###	1.34	2.05	-1.44	###	-1.44	###	2.12	###	1.37	###	.26 5.48
Job Satisfaction	.59	###	.44	1.46	.19	###	.19	###	-.22	###	1.57	###	.10 1.65
Communication Adequacy	.32	###	.83	2.42	-1.04	###	-1.04	###	-.48	###	1.46	###	.14 2.49
Overall Effectiveness		###	.93	2.11	-.01	###	-.01	###	.92	###	2.55	###	.25 5.25

p < .01 (one tailed), ### p < .05 (one tailed), ### p < .10 (one tailed).

The F-values[ⓧ] of the regression analysis demonstrated significant variance in the overall effectiveness ($p < .01$), organizational identification ($p < .01$), trust-in-organization ($p < .01$), commitment ($p < .05$), subunit cooperation ($p < .05$) and communication adequacy ($p < .05$) scores (Table 6). This suggested that the linear function of the six power variables accounted for significant amount of variance on these effectiveness indices.

2. Main Effects of Actual and Expected Participation:

The 't' values of the regression analyses were used to test the hypotheses. The results displayed in Table 6 showed that the main effect of actual participation was significant on organizational identification ($p < .01$) and overall effectiveness ($p < .05$) scores. It also approached significance on commitment ($p < .10$) and trust-in-organization ($p < .10$) variables. Thus, Hypothesis 1a was confirmed on organizational identification and overall effectiveness variables and it also showed a trend towards the confirmation on the commitment and trust-in-organization scores.

[ⓧ]The F-values were obtained by the formula, $F = \frac{(n-k)}{(k-1)} \times \frac{R^2}{(1-R^2)}$;

• where n = number of observations, k = number of independent variables and R^2 = proportion of variance accounted by the model in the dependent variables.

The main effect of expected participation was not significant on any of the effectiveness indices but for the trust-in-organization variable where the 't' value approached significance ($p < .10$). The results thus favoured disconfirmation of Hypothesis 1b which stated a negative main effect of expected participation on the effectiveness indices.

5. Interaction Effects of the Actual and Expected Participation :

The interaction effect of the actual and expected participation was significant on overall effectiveness ($p < .05$), organizational identification ($p < .05$), trust-in-organization ($p < .05$), communication adequacy ($p < .01$) and organizational loyalty ($p < .05$) scores. However, the 't' value only approached significance ($p < .10$) on the job-satisfaction scores (Table 6).

The effectiveness scores revealing significant interaction effects were further analyzed through post-hoc comparison^x of the cell means. The results are presented in Table 7. In order to test Hypothesis 1c, the aggregated

^xPost-hoc comparisons of the aggregated means of the congruent and incongruent cells were obtained by using the formula,

$$t = \frac{(a+d) - (b+c)}{\sqrt{s^2 \left(\frac{1}{n_1} + \frac{1}{n_2} + \frac{1}{n_3} + \frac{1}{n_4} \right)}}$$

where a, b, c and d are the means of cells 1, 2, 3 and 4 respectively, s^2 is the squared standard error, and n_1 , n_2 , n_3 and n_4 represent the number of observations in cells 1, 2, 3 and 4, respectively.

Table 7 - Post-hoc comparisons between the aggregated means of congruent and incongruent cells and other possible comparisons

Dependent Variable	Individual comparisons	[(a+d)-(b+c)] (t)	(a - b) (t)	(a - c) (t)	(a - d) (t)	(b - c) (t)	(b - d) (t)	(c - d) (t)
Organizational Identification	3.31 ^{***}	4.68 ^{***}	.72	.67	3.25 ^{***}	3.92 ^{***}	.17	
Job Involvement	1.48							
Organizational Loyalty	1.69 ^{**}	1.35	1.25	.18	.05	.36	1.08	
Commitment	2.67 ^{***}							
Subunit Cooperation	2.22 ^{**}							
Trust-in-Organization	2.94 ^{***}	4.72 ^{***}	.49	1.09	3.48 ^{***}	3.70 ^{***}	.98	
Job Satisfaction	1.81 ^{**}	2.21 ^{**}	1.83 ^{**}	2.14 ^{**}	.01	.43	.41	
Communication Adequacy	2.80 ^{***}	1.50	1.37	.64	.07	.95	.82	
Overall Effectiveness	3.01 ^{***}	4.61 ^{***}	1.60	1.42	2.07 ^{**}	3.04 ^{***}	.63	

^{***}p < .01 (one tailed), ^{**}p < .05 (one tailed).

N.B. The blank rows point out that the interaction term was not significant for these variables.

means of congruent cells 1 and 4 and incongruent cells 2 and 3 were compared for all the effectiveness indices. As hypothesized, the results revealed significant difference between the means of the congruent and incongruent cells on overall effectiveness and all other subscale scores but for the job involvement measure. The results, thus, strongly confirmed Hypothesis 1c.

The results of the other post-hoc comparisons are also presented in Table 7. The results revealed that cells 1 and 2, 2 and 3, and 2 and 4 differed significantly on organizational identification and trust-in-organization scores. The scores on job satisfaction scale differed significantly between cells 1 and 2, 1 and 3, and 1 and 4. Overall effectiveness index differed significantly between the cells 1 and 2, 2 and 3, and 2 and 4.

The means of organizational effectiveness scores are plotted in Figures 3-11. The figures generally show that the supervisors' perceptions were highest on effectiveness when the subunits were high on both actual as well as expected participation. The lowest scores of effectiveness were obtained when the subunits were low on actual participation but high on expected participation. However, when the subunits were low on expected participation, the effectiveness scores did not differentiate between high and low actual participation.

FIG. 3

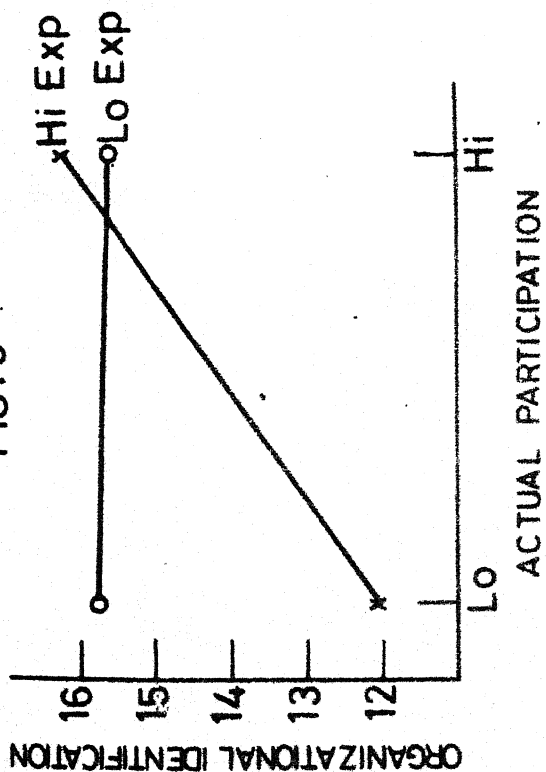


FIG. 4

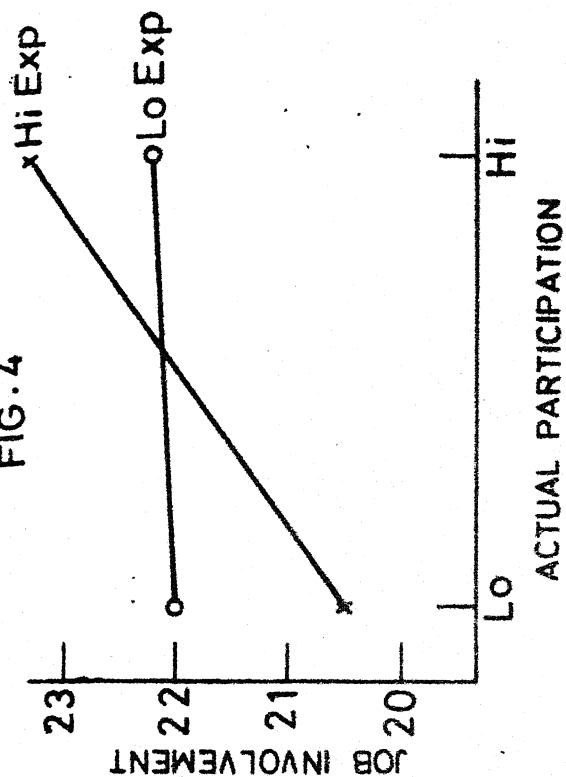


FIG. 5

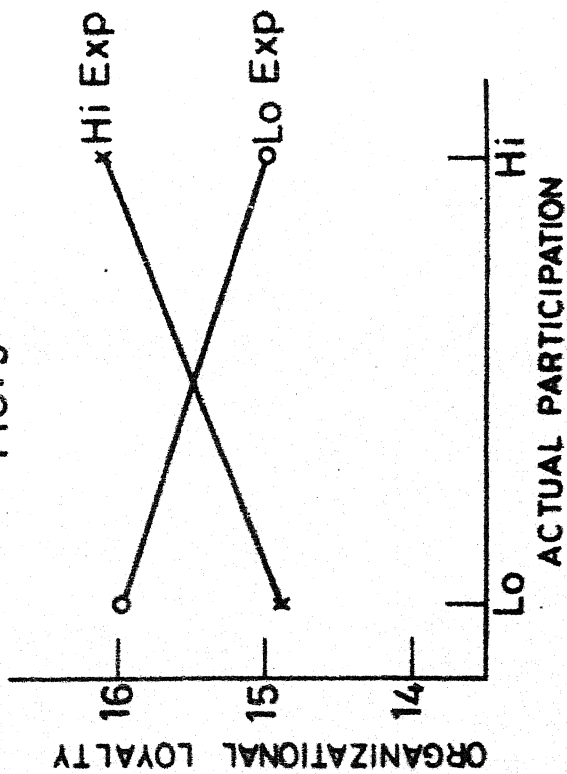


FIG. 6

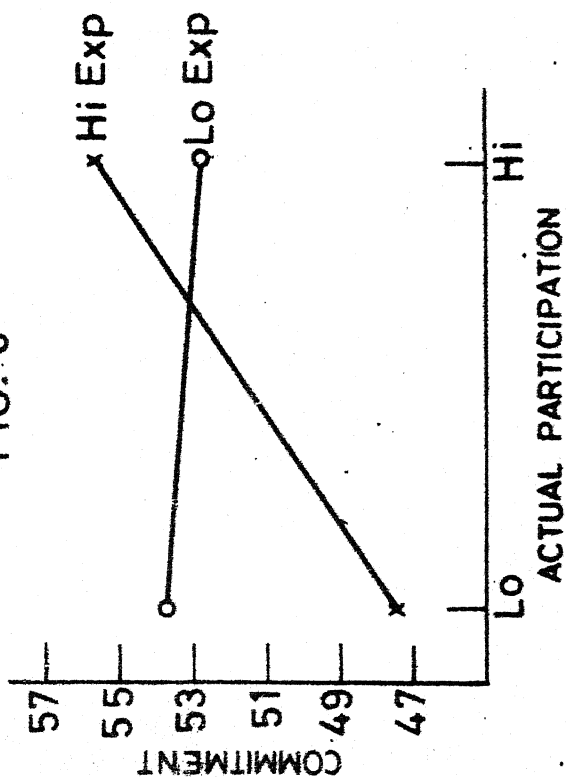


FIG. PANEL 3-6 SHOWING INTERACTION OF ACTUAL AND EXPECTED PARTICIPATION.

FIG. 7

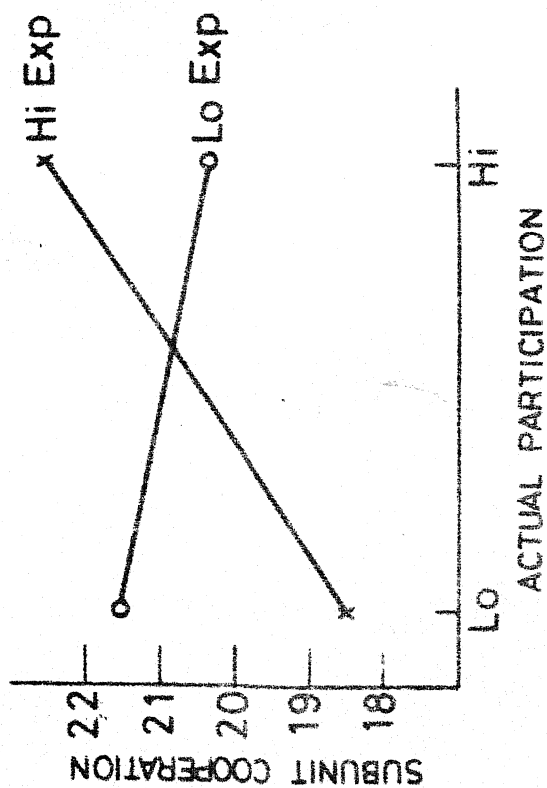


FIG. 8

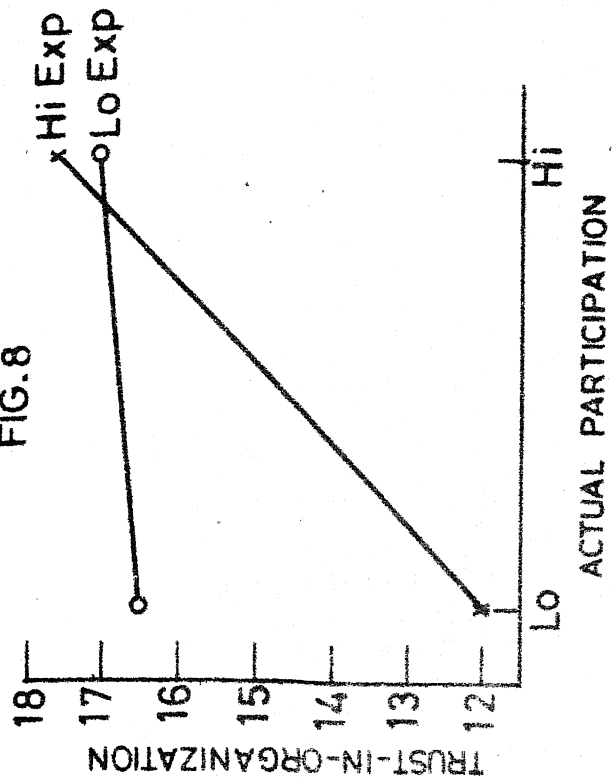


FIG. 9

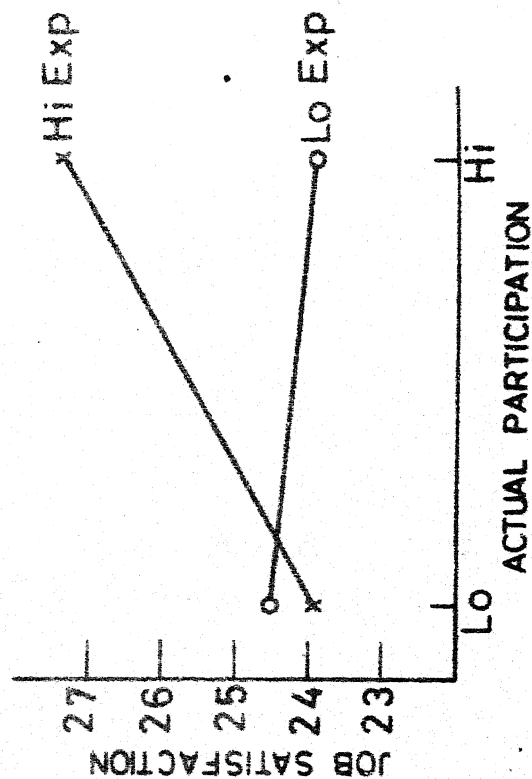


FIG. 10

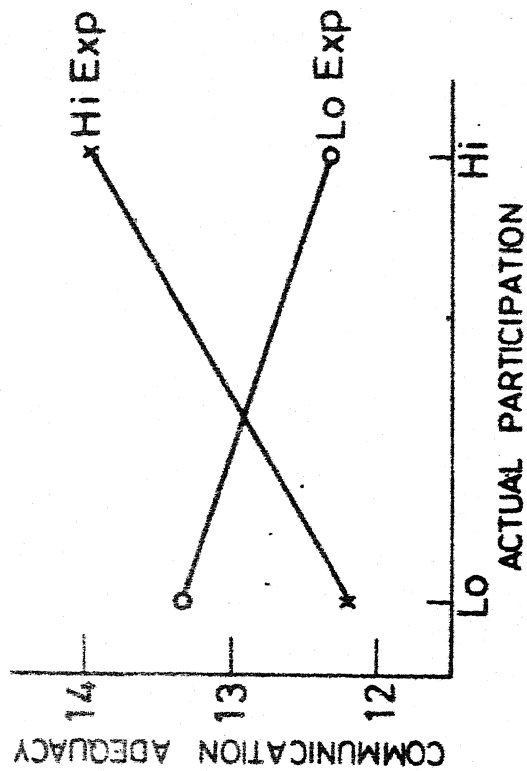


FIG. PANEL 7-10 SHOWING INTERACTION OF ACTUAL AND EXPECTED PARTICIPATION

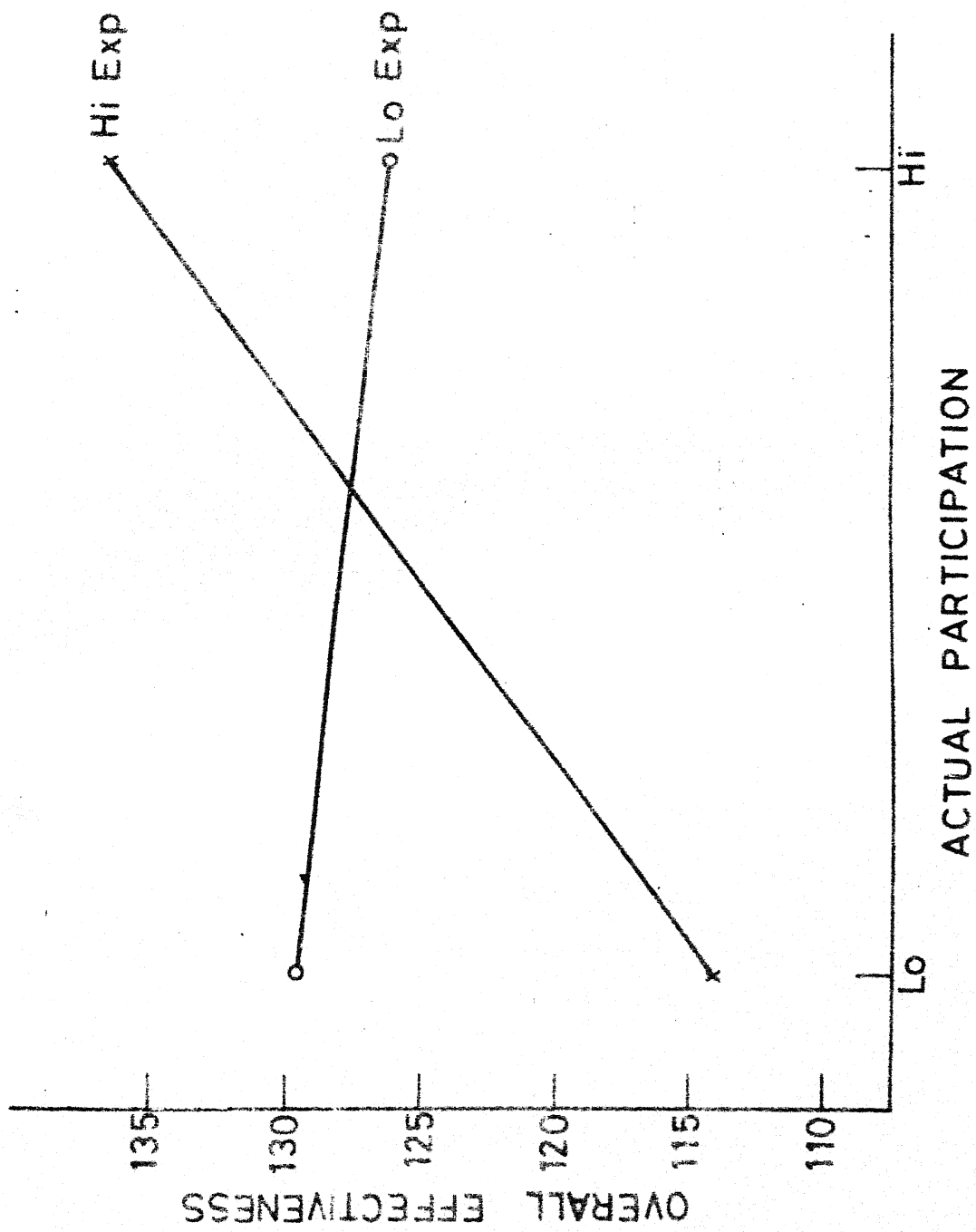


FIG. 11. SHOWING INTERACTION OF ACTUAL AND EXPECTED PARTICIPATION.

4. Effects of the Bases of Superiors' Power Utilization:

The 't' values showing the effects of position, expert and referent power are also displayed in Table 6. The results showed that the superiors' use of position power did not make any significant effect on the supervisors' perceptions of overall organizational effectiveness. Position power showed a trend toward significance ($p < .10$) on trust-in-organization and it also showed a negative beta-coefficient. The results thus did not provide a clear evidence to confirm Hypothesis 3a which stated a negative relationship between position power and effectiveness scores.

As hypothesized, expert power was found to make significant impact on the trust-in-organization variable and the 't' value of expert power also approached significance ($p < .10$) on organizational identification scores (Table 6). The results revealed that expert power was not related significantly to any other effectiveness variable. Thus, Hypothesis 3b which stated a positive effect of the superiors' use of expert power was confirmed only on trust-in-organization scores.

The 't' values revealing the effects of referent power on organizational effectiveness scores are also displayed in Table 6. Referent power demonstrated a highly significant effect on overall effectiveness ($p < .01$), organizational

identification ($p < .01$), commitment ($p < .05$) and subunit cooperation ($p < .05$) scores. The results also showed that the effect of referent power approached significance ($p < .10$) on trust-in-organization, job satisfaction and communication adequacy scores. However, the effect of referent power was not significant on job involvement and organizational loyalty scores. The results thus partially confirmed Hypothesis 3c which maintained the positive effects of referent power on the measures of organizational effectiveness.

B. Power Equalization Analysis

1. Amount of Variance of the Effectiveness Indices:

The results of regression analysis are presented in Table 8. The analysis revealed that the R^2 for the effectiveness variables ranged between .05 to .26. The regression analysis accounted for 24% variance in overall effectiveness scores. Further, it accounted for 26% variance in organizational identification and 24% variance in trust-in-organization scores. This was followed by 15%, 15%, 11%, 9%, 9% and 5% variance in commitment, subunit cooperation, job involvement, communication adequacy, job satisfaction and organizational loyalty scores, respectively.

The F-values were also analyzed for the measures of organizational effectiveness. The analysis revealed

Table 8 - t, R² and F values of the regression of effectiveness indices on actual power equalization, expected power equalization, interaction (actual x expected), position power, expert power and referent power.

Dependent variables	Independent variables		Actual power equalization		Expected power equalization		Interaction (Actual x expected)		Position power		Expert Power		Referent power		R ²		F	
	t		t		t		t		t		t		t				t	
Organizational Identification	1.75 ^{***}			.41		.12		-.46		1.47 [*]		3.44 ^{***}		.26		5.51 ^{***}		
Job involvement	.44			-.23		2.58 ^{***}		-.64		.31		.68		.11		1.84 [*]		
Organizational Loyalty	.04			-1.52		-.52		.88		-.12		1.37 [*]		.05		0.89		
Commitment	1.07			-.95		1.03		.05		.73		2.22 ^{***}		.15		2.74 ^{***}		
Subunit Cooperation	.21			-.50		1.30 [*]		.63		.85		2.72 ^{***}		.15		2.65 ^{***}		
Trust-in-Organization	1.35 ^{***}			-.78		.74		-1.89 ^{***}		2.25 ^{***}		1.89 ^{***}		.24		4.74 ^{***}		
Job Satisfaction	.55			-.52		1.35 [*]		.03		-.54		2.06 ^{***}		.09		1.51		
Communication Adequacy	.98			-1.22		.85		-.49		.05		1.82 ^{***}		.09		1.58		
Overall Effectiveness	1.32 ^{**}			-1.18		.69		-.09		1.25		3.00 ^{***}		.24		4.74 ^{***}		

***p < .01, **p < .05, *p < .10.

significant F-values for overall effectiveness ($p < .01$), organizational identification ($p < .01$), trust-in-organization ($p < .01$), commitment ($p < .05$) and subunit cooperation ($p < .05$) scores (Table 8). The F-value also approached significance ($p < .10$) for job involvement scores. The F-values for other effectiveness indices, namely, organizational loyalty, job satisfaction, and communication adequacy were not significant.

2. Main Effects of Actual and Expected Power Equalization:

The 't' values of regression analysis are presented in Table 8. Results showed that the effect of actual power equalization was significant on two effectiveness indices, namely, organizational identification ($p < .05$) and trust-in-organization ($p < .05$). The 't' value for the overall effectiveness scores only showed a trend toward significance ($p < .10$). Other organizational effectiveness indices however, did not reveal a significant effect of actual power equalization. Thus, the results of the study provided support to confirm Hypothesis 2a maintaining a positive relationship between actual power equalization and the scores on organizational identification and trust-in-organization subscales.

The 't' values of expected power equalization did not show any significant effect on the organizational effectiveness scores except for a trend toward significance ($p < .10$)

on the organizational loyalty variable (Table 8). However, the beta weights of expected power equalization on all effectiveness indices demonstrated a negative regression trend, even though it did not reach significance. The results thus disconfirmed Hypothesis 2b which anticipated a significant-negative effect of expected power equalization on the supervisors' perceptions of organizational effectiveness.

3. Interaction Effects of the Actual and Expected Power Equalization :

The interaction between actual and expected power equalization revealed significant 't' value for job involvement variable ($p < .01$) only (Table 8). Results also demonstrated a trend toward significant interaction effect on job satisfaction ($p < .10$) and subunit cooperation ($p < .10$) scores.

Similar to the post-hoc comparisons in the analysis of the interaction between the actual and expected participation, the confirmation of Hypothesis 2c was obtained through comparing the aggregated means of congruent and incongruent cells. The results of these analyses are displayed in Table 9(i). The analysis provided evidence for confirming Hypothesis 2c on job involvement ($p < .01$), overall effectiveness ($p < .05$), commitment ($p < .05$), and trust-in-organization ($p < .05$) scores. The results also revealed a trend toward the confirmation of Hypothesis 2c on organizational identification ($p < .10$), job satisfaction ($p < .10$) and communication adequacy ($p < .10$) scores.

Table 9 - Post-hoc comparisons of the aggregated means of the congruent and incongruent cells and all possible comparisons on the job involvement variable

(i)

Dependent Variables	Comparisons [(a+d)-(b+c)]
Organizational Identification	1.61 [*]
Job Involvement	2.85 ^{***}
Organizational Loyalty	0.66
Commitment	1.84 ^{**}
Subunit Cooperation	0.10
Trust-in-Organization	2.32 ^{**}
Job Satisfaction	1.39 [*]
Communication Adequacy	1.61 [*]
Overall Effectiveness	2.02 ^{**}

*** $p < .01$ (one tailed); ** $p < .05$ (one tailed); * $p < .10$ (one tailed).

(ii)

Dependent Variables	Comparisons (a-b) (t)	(a-c) (t)	(a-d) (t)	(b-c) (t)	(b-d) (t)	(c-d) (t)
Job Involvement	3.16 ^{***}	2.32 ^{**}	0.76	0.20	1.69 ^{**}	1.75 ^{**}

*** $p < .01$; ** $p < .05$.

Furthermore, other post-hoc comparisons were also performed between the mean scores on the job involvement variable which showed a significant interaction effect. The results displayed in Table 9(ii) revealed significant differences between cells 1 and 2, 1 and 3, 2 and 4, and 3 and 4.

Figures 12-20 present the cell means of the nine effectiveness indices. The figures generally show that the effectiveness scores were the highest when the subunits were high on both actual as well as expected power equalization. However, the scores on organizational loyalty and subunit cooperation were the highest when the subunits were low on actual power equalization but high on expected power equalization. The lowest scores on effectiveness indices were obtained when the subunits were high on actual power equalization but low on expected power equalization. However, the lowest scores on organizational loyalty were obtained when the subunits were high on both actual as well as expected power equalization.

4. Effects of the Bases of Superiors' Power Utilization:

The 't' values showing the effects of the superiors' use of position, expert and referent powers are also displayed in Table 8. The analysis revealed that position power was related negatively to the trust-in-organization scores ($p < .05$).

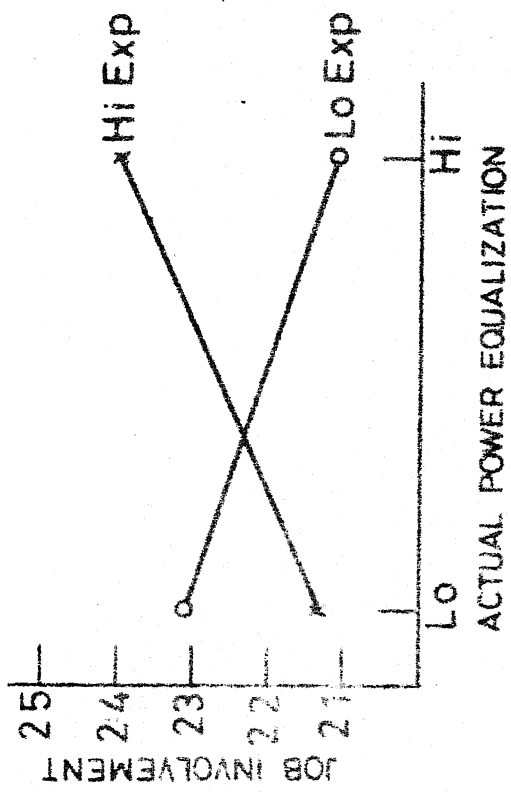
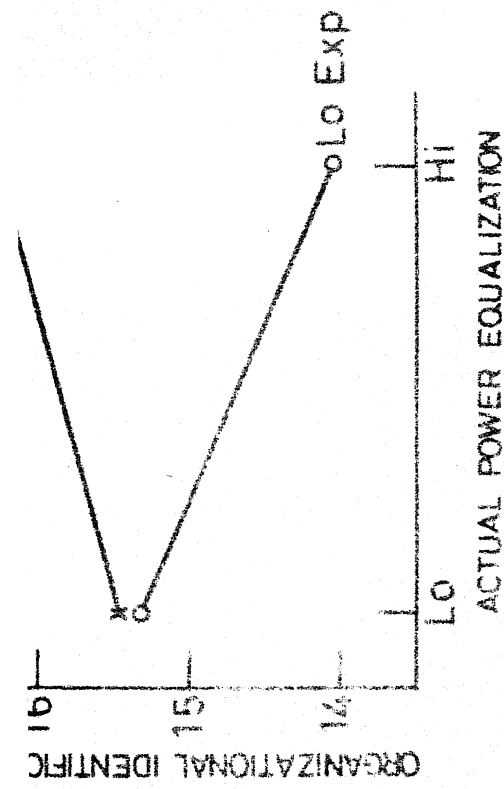


FIG.14

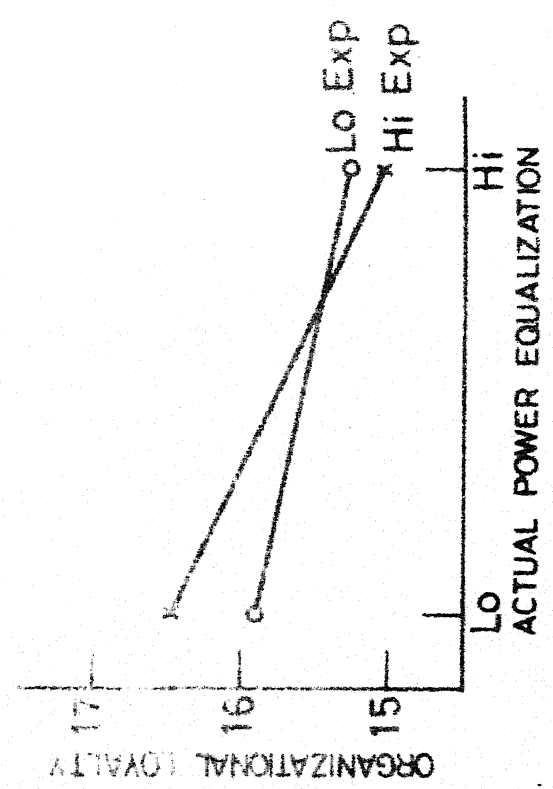


FIG.15

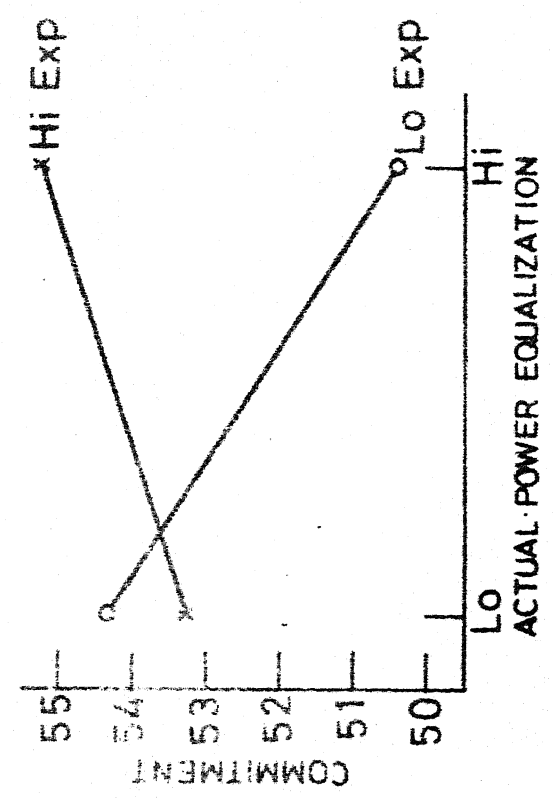


FIG. PANEL 12-15 SHOWING INTERACTION OF ACTUAL AND EXPECTED POWER EQUALIZATION.

FIG.16

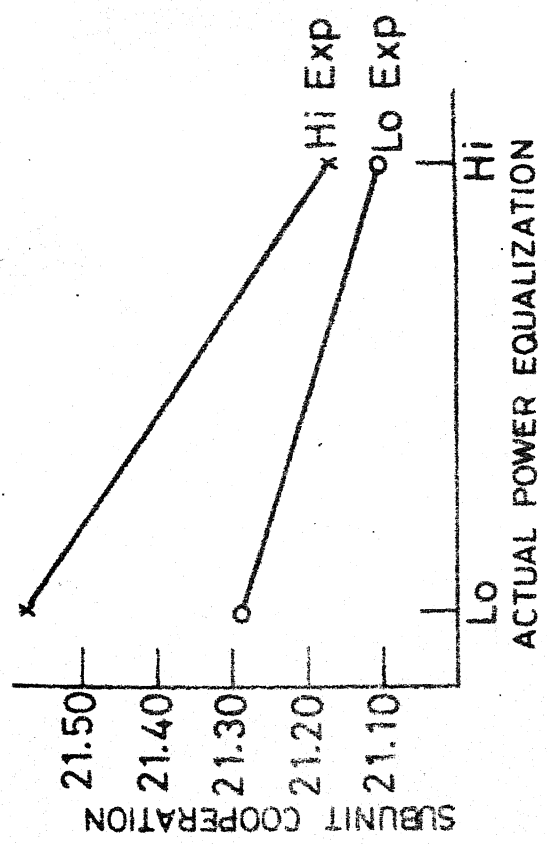


FIG.17

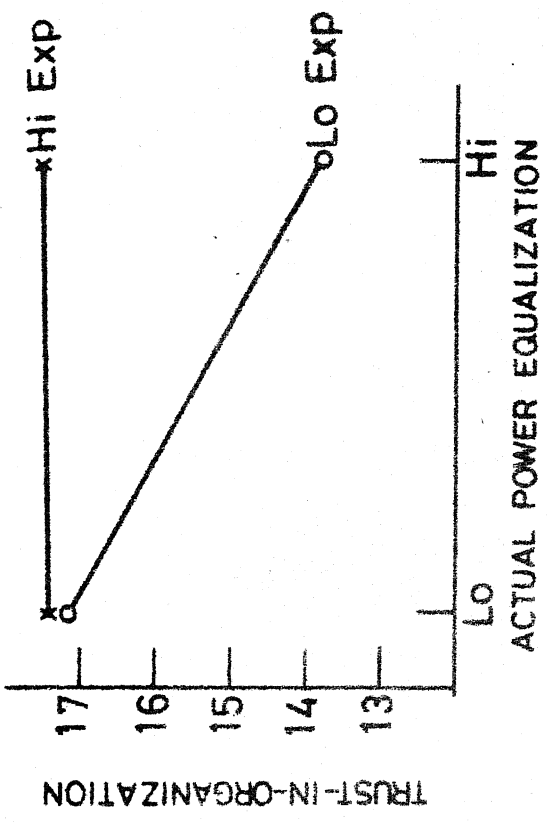


FIG.18

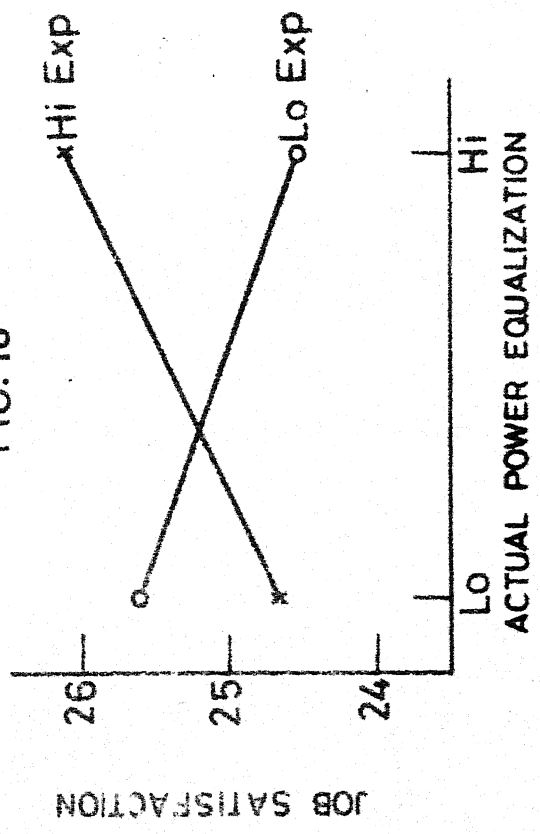


FIG.19

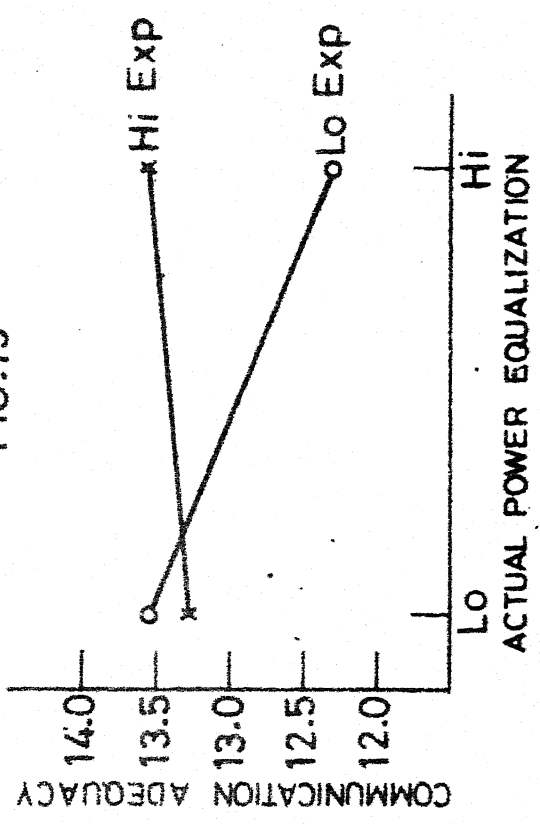


FIG. PANEL 16-19 SHOWING INTERACTION OF ACTUAL AND EXPECTED POWER EQUALIZATION

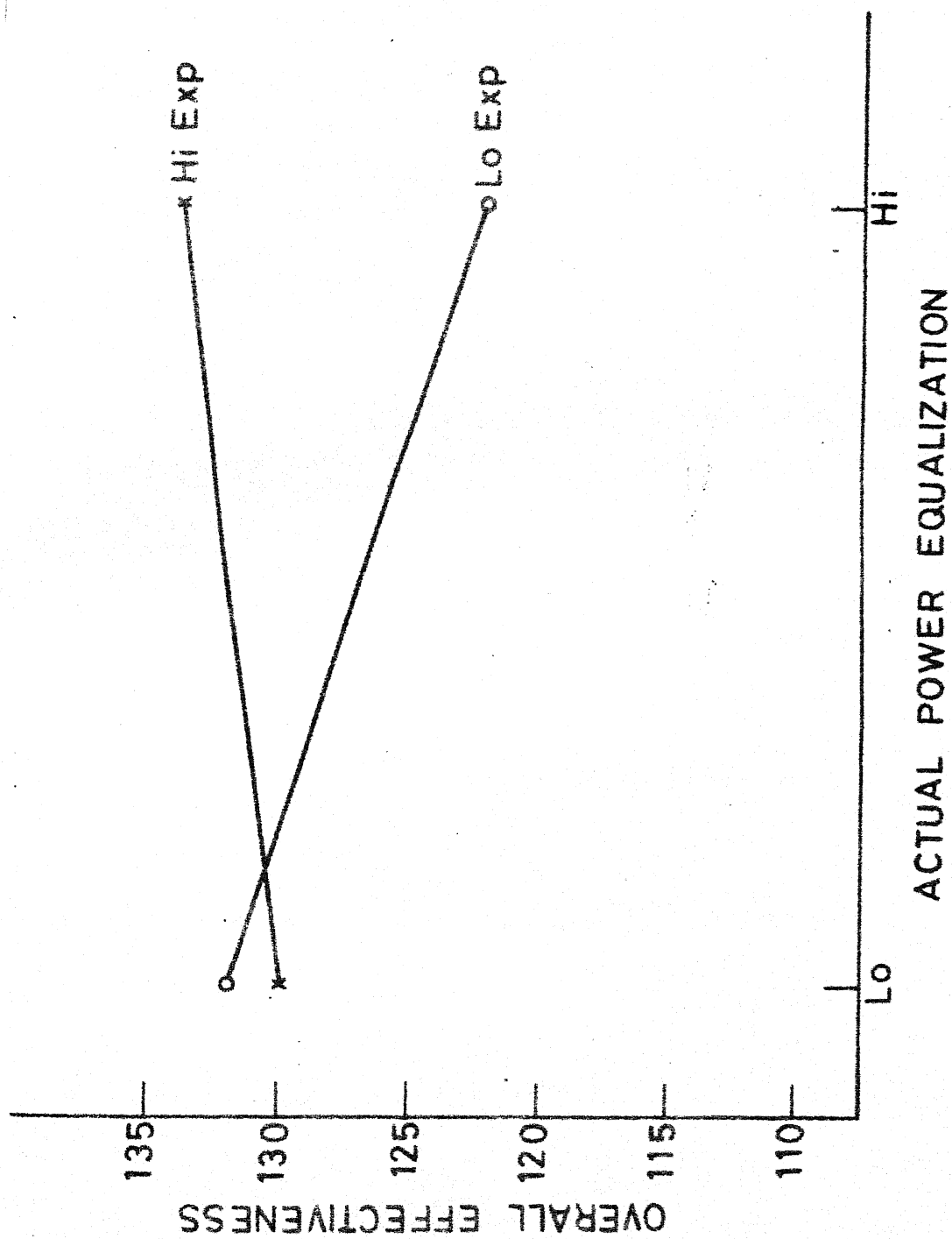


FIG. 20 SHOWING INTERACTION OF ACTUAL AND EXPECTED POWER EQUALIZATION.

The results failed to show a significant effect of position power on other indices of effectiveness. However, with the exception of commitment and organizational loyalty scores, all other indices of effectiveness showed negative beta coefficients. Thus Hypothesis 3a which anticipated a negative relationship between the superiors' use of position power and the scores of organizational effectiveness, was confirmed only for the trust-in-organization variable.

Expert power demonstrated significant 't' value for the trust-in-organization ($p < .05$) variable. The results also revealed a trend towards significance of the effect of expert power on the organizational identification ($p < .10$) variable. Expert power did not make a significant effect on overall effectiveness and other subscales of effectiveness. The results thus provided support for Hypothesis 3b stating a positive effect of expert power on the trust-in-organization variable.

As hypothesized, referent power revealed significant 't' values for overall effectiveness ($p < .01$), organizational identification ($p < .01$), subunit cooperation ($p < .01$), trust-in-organization ($p < .05$), job satisfaction ($p < .05$), communication adequacy ($p < .05$) and commitment ($p < .05$) scores (Table 8). The 't' values for organizational loyalty variable also approached significance ($p < .10$). The results thus demonstrated a highly significant contribution of referent

power to the largest number of organizational effectiveness variables. These findings confirmed Hypothesis 3c, namely, the higher the use of referent power, the higher the scores on organizational effectiveness. However, Hypothesis 3c was not confirmed on the job involvement variable.

IV. ANOVA OF PERFORMANCE RATINGS

The performance ratings of the independent observers were analyzed using the two factor randomized block design of ANOVA. The complete design was represented as a 2 (high and low actual power distribution) x 2 (high and low expected power distribution) x 3 blocks (observers) design. The classifications of subunits as high and low on the actual and expected factors of participation and power equalization for this analysis were identical to the ones used for the regression analysis (Figs. 1 and 2).

A Participation Analysis

The number of observations in the treatment conditions were unequal (Fig. 1). The results[‡] are displayed in Table 10.

[‡]The treatment, block, block x treatment and within (error) sum of squares were obtained by the preliminary analysis of the randomized block design. Partitioning of treatment effect into actual participation, expected participation and interaction effects was obtained using the Method of Fitting Constants (Bancroft, 1968). Firstly, the interaction effect was tested at $p < .25$. If the interaction effect was absent, main effects were also obtained by continuing with the Method of Fitting constants. However, if the interaction effect was significant, main effects were obtained by using the Method of Weighted Squares of Means.

Quality of work					Quantity of work				
Source	SS	df	MS	F	Source	SS	df	MS	F
Treatment	1.57	3	.52	1.36	Treatment	4.51	3	1.50	4.23 ###
Actual Participation A (eliminating expected participation B)	.03	1	.03	.08	Actual Participa- tion A (elimina- ting expected participation B,	.08	1	.08	.23
Expected participation B (eliminating Actual participation A)	1.21	1	1.21	3.25 ###	Expected Partici- pation B (elimi- nating actual participation A)	.95	1	.95	2.61
Interaction AxB	.07	1	.07	.19	Interaction AxB	2.02	1	2.02	5.69 ###
Blocks (observers)	.39	2	.19	.51	Blocks (observers)	1.17	2	.58	1.64
Blocks x Treatment	2.44	6	.41	1.06	Blocks x Treatment	7.30	6	1.30	3.67 ###
Within (error)	9.24	24	.38		Within (error)	8.52	24	.35	

[#] p < .10.

^{###} p < .01

^{###} p < .05.

For the quality of work analysis, the interaction term was initially tested at $p < .25$ and was found to be non-significant. Therefore, the main effects were obtained by the Method of Fitting constants. The results revealed that the effect of actual participation was not significant. The F-ratio for expected participation only approached significance ($p < .10$).

For the quantity of work analysis also, the interaction effect was first tested and was found to be significant ($p < .05$). Thus, the main effects were obtained using the Method of Weighted Squares of Means. The analysis revealed that the main effects of both actual participation and expected participation were nonsignificant.

Post-hoc comparisons were also performed for the aggregated means of the congruent and incongruent treatment conditions. The results displayed in Table 11 revealed that the 't' value was significant on the ratings of quantity of work but not on the quality of work ratings.

B. Power Equalization Analysis

The number of observations in the treatment conditions were equal (Fig. 2). The ANOVA results are presented in Table 12.

For the quality of work analysis, the main effects of actual power equalization ($p < .01$) and expected power

Table 11 - Means of the treatment conditions and the post-hoc comparisons of the aggregated means of congruent and incongruent cells (Participation analysis).

Dependent Variables	Comparisons [(a+d)-(b+c)] (t)	Hi-Actual		Lo-Actual		Hi-Actual		Lo-Actual	
		Hi-Expected	Means	Hi-Expected	Means	Lo-Expected	Means	Lo-Expected	Means
Quality of Work	.95	10.40		10.50		11.50		12.00	
Quantity of work	8.14 ^{XXXX}	10.80		9.50		10.50		12.66	

~~XXXX~~ p < .01.

Table 12 - ANOVA results of observer ratings (Power Equalization Analyses)

Source	Quality of work			Quantity of work		
	SS	df	MS	F	Source	F
Treatments	4.97	3	1.66	30.47 ^{***}	Treatments	.67 3 .22 .32
Actual Power Equalization A	1.36	1	1.36	25.00 ^{***}	Actual Power Equalization A	.11 1 .11 .16
Expected Power Equalization B	.24	1	.24	4.42 ^{**}	Expected Power Equalization B	.11 1 .11 .16
Interaction A x B	3.37	1	3.37	61.95 ^{***}	Interaction A x B	.44 1 .44 .64
Blocks (observers)	.39	2	.19	3.58	Blocks (observers)	.67 2 .33 .48
Blocks x Treatments	6.97	6	1.16	21.35 ^{***}	Blocks x Treatments	3.33 6 .55 .81
Within (error)	1.31	24	.05		Within (error)	17.33 24 .72

^{***} $p < .01$

^{**} $p < .05$.

equalization ($p < .05$) were found highly significant. The interaction of the actual and expected power equalization was also found highly significant.

For the quantity of work analysis, the results showed that the main effects of actual and expected power equalization were not significant. It also failed to reveal any significant interaction effect of actual and expected power equalization.

Post-hoc comparisons (Table 13) of the mean ratings of the congruent and incongruent treatment conditions revealed significant 't' values for both quality ($p < .01$) and quantity of work ($p < .05$).

Summing up, the results of the study showed that the organizational identification and the trust-in-organization scores were consistently related to the power variables employed in this study. The results highlighted the role of actual participation and actual power equalization as determinants of organizational identification and trust-in-organization. It was also revealed that the expected participation and the expected power equalization did not account for the variation in organizational effectiveness scores. However, the congruence between the actual and expected participation and that between the actual and expected power equalization, was related to a

Table 13 - Means of the treatment conditions and the post-hoc comparisons of aggregated means of congruent and incongruent cells (Power Equalization Analysis)

Dependent variables	Comparisons [(a+d)-(b+c)] (t)	Hi-Actual		Lo-Actual		Hi-Actual		Lo-Actual	
		Hi-Expected	Means	Hi-Expected	Means	Hi-Expected	Means	Hi-Expected	Means
Quality of work	23.62 ^{xxx}	11.67		11.00		9.33		12.33	
Quantity of Work	2.35 ^{xxx}	11.33		11.00		10.33		11.33	

^{xxx}p < .01

^{xx}p < .05.

larger number of effectiveness indices than were the main effects of actual participation and actual power equalization variables. The results also revealed that the superiors' use of position power was related negatively to the trust-in-organizational variable while the use of expert power was related positively to the trust-in-organization variable. Furthermore, the superiors' use of referent power was most strongly and consistently related to the indices of organizational effectiveness.

CHAPTER 4

DISCUSSION

Though the present study was designed to test specific relationships between the variables of power and the effectiveness of the organization, it also provided fresh insights into the complexities of organizational functioning.

I. INTERPRETATION OF MAJOR FINDING

A. Relationship Between Power Distribution and Organizational Effectiveness:

The two aspects of power distribution, namely, actual participation and actual power equalization, appeared as positive correlates of the overall effectiveness of the organization. This finding generally supported Tannenbaum's theory (1968) which contends that the average height and the slope of power distribution are positively related to organizational effectiveness.

The positive effect of actual participation and actual power equalization on the variable of organizational identification appeared consistent with the meaning and the

process of participation and power equalization. An increased participation as well as an increased power equalization, provide opportunities to the members of different hierarchical levels to collectively identify with the goals of the organization and propose positive lines of action for goal achievement. The members' participation in the organizational decision making enlarges the amount and accuracy of information concerning relevant issues (Lawler and Hackman, 1969; Lowin, 1968; Strauss, 1963). It also enhances their identification with issues (Coch and French, 1948). The members thus begin to identify with the problems and decisions of the organization as if these were their own.

Even though actual power distribution variables correlated with the overall effectiveness measure, their selective relationship with organizational identification variable is noteworthy both for its meaning and for the sensitivity of the measure. The three subscales, namely, organizational identification, job involvement and organizational loyalty, were combined to yield the commitment index. The other two subscales did not correlate with the actual power distribution variables raising useful differentiation in the meaning of job involvement and loyalty to the organization vis-a-vis organizational identification. Members' loyalty to the organization implies a sense of indebtedness and affective attachment to the

organization. This sense of indebtedness represents a component of the personalized ethics of the individual which can be explained through the notion of exchange (March and Simon, 1958; Hrebiniak and Alutto, 1972). Thus, members may express their indebtedness for what the organization has done for them. Probably getting the job itself can make these respondents feel indebted to the organization, a feeling which can be expressed without considering the nature of other experiences on the job. Thus, the actual power distribution did not contribute significantly to the supervisors' loyalty to the organization. Similarly, job involvement is also considered to be a "relatively stable personal characteristic" (Runyon, 1973) and is 'relatively unaffected by changes in the work environment' (Lodahl and Kejner, 1965). It is, therefore, plausible that the highly job-involved members need not necessarily be concerned with the distribution of power in the organization.

The finding that actual participation and actual power equalization related positively to the trust-in-organization variable, was still another support for the dynamics of power distribution. The greater the distribution of power among the members of various hierarchical levels, the higher is their motivational orientation and intention for cooperative behaviour (Deutsch, 1960).

Rotter (1971) defined interpersonal trust as 'an expectancy held by an individual or group that the word, promise, verbal or written statement of another individual or group can be relied upon' (p. 444). Thus, it is not surprising that the distribution of power which induces greater interdependence among members, results in a high degree of expectancy that others in the organization can be trusted.

Recently, Kumar and Singh (1978) have suggested that among Indian managers, interpersonal trust is a consequence of power distribution and not its antecedent. However, our findings are in no position to suggest a causal relationship between power distribution and organizational trust. The findings instead indicate that the distribution of power and trust-in-organization operate as a feedback process. Thus, both power distribution and organizational trust affect each other.

The results of our study did not identify a positive relationship between the distribution of power and overall job satisfaction. This was, however, at variance with the findings of previous studies (Dowers, 1964; Bachman, Smith and Slesinger, 1966; Rosner, 1973). One of the reasons for this finding could be that the measure of job satisfaction employed in this study provided a global index of satisfaction with the job; the measure did not seek specific experience of members' satisfaction, such as, with their superiors, or

coworkers, or even their satisfaction with pay, promotion and company policies. Previous studies, on the other hand, measured members' satisfaction either with the superiors or with some aspects of the job and the company. Thus, it would not be unwarranted to conclude that in earlier studies, power distribution correlated with members' satisfaction with specific factors of the job and not with an overall satisfaction with the job.

B Congruence Between the Actual and the Expected Power Distribution and Organizational Effectiveness:

The findings of the present study revealed that the congruence between the actual and expected factors of power distribution is a more powerful correlate of organizational effectiveness than either the actual or the expected factors alone. These findings were thus in conformity with the results of earlier studies (Tannenbaum, 1961; Smith and Tannenbaum, 1963; Bowers, 1964; Zupanov and Tannenbaum, 1968) which also observed a negative correspondence between the discrepancies in the perceptions of the actual and ideal amount of power distribution and the indices of organizational effectiveness. This study further advanced the contention of Tannenbaum's theory (1968) that the congruence between members' perceptions and expectations of distribution of power are related to a broader spectrum of organizational effectiveness indices than what either the actual or expected

effectiveness. The joint effects as revealed through the congruence between the actual and expected power distribution may be more conducive for organizational effectiveness than the effects of an incongruent increase or decrease in the amount and distribution of influence at one level or the other.

C. Comparison of Interaction Between the Actual and Expected Participation, and the Interaction Between the Actual and Expected Power Equalization vis-a-vis the Organizational Effectiveness

Of particular interest were the findings about the differential effects of interaction between the actual and the expected participation and interaction between the actual and the expected power equalization. The regression analyses of the participation and power equalization dimensions pointed to a remarkably different picture of interaction between their actual and expected factors.

It was found that when the actual participation was high, presence of high or low expected participation factors did not make a difference in organizational effectiveness. However, when the actual participation was low, the presence of high or low expected participation made significant variations in organizational effectiveness indices (Figs. 3-11). On the contrary, in the power equalization analysis, the interaction between the actual and expected factors showed a different pattern. It was

observed that when the actual power equalization was high, the presence of high or low expected power equalization significantly accounted for the variations in the scores of organizational effectiveness. However, when the actual power equalization was low, the presence of high or low expected power equalization did not account for significant variations in the organizational effectiveness scores (Figures 12-20).

The findings of the study thus suggest that keeping the actual participation and power equalization constant, the expected participation and expected power equalization may not go along together to account for the organizational effectiveness. It appears that while the expected participation of members in the decision making is related to the organizational effectiveness, the expected power equalization is not. Thus it is not surprising that when the members expect a higher amount of influence to be exercised by the lower levels, they do not expect a corresponding increase in the amount of influence of the members of higher levels. Studies of organizational power (Tannenbaum and Cooke, 1978) indicated that an increase in the influence of lower levels does not necessitate a decrease in the influence of the members of the higher levels of hierarchy. Thus, Tannenbaum and Cooke (1978) identified a logical possibility of the integration of the two divergent viewpoints

about the desirability of participation or power equalization for enhancing organizational effectiveness. Our findings, however, indicate that the zero-sum concept of power does not seem to hold true when members' expectations of the amount of influence by the various hierarchical levels in the organizational subunits are considered. It suggests that when the members expect an increase in the exercise of influence by the lower levels, they also expect no increase in the power of higher levels of the hierarchy.

Even though this study was not designed to answer the specific question about the interaction between the actual participation and the actual power equalization, and the interaction between the expected participation and expected power equalization, it suggests the formulation of a new hypothesis, namely, that the expected participation and the expected power equalization are mutually exclusive while the actual participation and the actual power equalization are not. This calls for a fresh empirical inquiry into the concept of organizational power in terms of the expectations of its members.

D. Bases of the Superiors' Power Utilization and Organizational Effectiveness

The findings of our study highlighted the role of the superiors' exercise of referent power as the most

significant determinant of the organizational functioning. Among the six power variables included in the regression analyses, it was the superiors' use of personal likeability as a mode of influence which related strongly to the largest number of effectiveness indices. The perception of superiors' likeability by definition implies the subordinates' identification with the superiors (French and Raven, 1959). The subordinates thus seek emotional attachment with the 'likeable' superior and tend to emulate the behaviour and values of the superior (Shetty, 1978). This finding becomes all the more important when we consider power relationships at the subunit level of the organization. Superior-subordinate interaction is inevitable in the day-to-day functioning of subunits. Thus, the superiors who are perceived as 'likeable' persons would prove successful in terms of both human fulfilment and task accomplishment.

The study also revealed that the superiors' use of position power related negatively to the trust-in-organization variable. On the contrary, the trust-in-organization variable was related positively to the superiors' use of expert power. This study thus points out that the exercise of position and expertise as modes of power utilization account for variations only in the organizational trust, while the use of referent power elicits changes in several aspects of the organizational functioning.

These findings were not only in conformity with the previous studies (Mowday, 1978; Lord, 1977; Bachman, Smith and Slesinger, 1966; Bachman, Bowers and Marcus, 1968), but also proposed a strong case for considering superiors' style of power exertion, particularly at the subunit level of the organizational functioning, as an important correlate of organizational effectiveness. The findings of the study further indicate that the control structure at the subunit level may not prove as strong a determinant of organizational effectiveness as the manner of the superiors' exertion of power over the immediate subordinates.

Finally, some of the findings of this study highlight trans-cultural generalizability of the organizational power phenomena. The fact that much of our results found considerable support from studies conducted in the western setting, suggests that organizations present some similarities in the process of power distribution and also in the superiors' modes of power utilization. An international study on organizational control (Tannenbaum, 1975) demonstrated that hierarchy in organizations is a universal phenomenon. The personality profiles of successful managers in Indian organizations have also been found to be comparable to those of their counterparts in the western setting (Kumar, 1970). Thus, it is probable that superiors in different settings seem to share similarities in their ways

of eliciting compliance from subordinates. Moreover, the distribution of power in different organizational settings is influenced by the internal demands of organizations probably overriding some of the cultural variations in its manifestations.

II. RETROSPECT AND PROSPECT

Though this study was bound to have some limitations characteristic of investigations in a live setting, it nonetheless provided further insights, both methodological and theoretical, into the relationship between the variables of organizational power and organizational effectiveness. It also incorporated factors, hitherto considered separately, into a unified framework for a richer understanding of organizational power and organizational effectiveness.

The Control Graph Method proved more useful for this research study because some preliminary checks were made to ensure the consistency in the perceptions of various hierarchical levels. The other method would be to consider hierarchical levels as a covariate along with other power variables and observe their effects, if any, on the indices of effectiveness. This would not only serve as a control over the biases in the ratings of the various hierarchical levels, but as a factor, would also be of interest in

understanding differences in perceptions of the organizational functioning by members of different hierarchical levels.

'Hard' criteria of organizational effectiveness, such as, actual output, company profits, absenteeism and turnover, are needed to further validate the findings of 'soft' criteria, such as, job satisfaction, organizational identification and trust, as revealed through the questionnaire ratings of effectiveness. Performance ratings by independent observers, though necessary, would be further substantiated by these additional indices of performance.

Future research can incorporate the examination of variations in effectiveness scores by discarding stepwise the power variables found nonsignificant. This could provide evidence for the relative utility of the particular variables used in this study. A promising area for future research could be to conduct multivariate analysis of variance for identifying which set of the power variables best accounts for the set of organizational effectiveness indices.

This study serves to identify various discrete variables of power, which could be useful in formulating a unified theory of organizational power. It leads to the formulation of a contingency theory of power in organizations.

It is proposed that the organizational effectiveness is contingent upon the extent of actual participation and actual power equalization in the organization, the degree of congruence between the actual and expected factors of power distribution and the superiors' likeability as power agents. This contingency proposition of organizational power is deemed to explain the organizational effectiveness in both its strength and breadth.

Future research should be directed to test the contingency proposition of organizational power in various cross-cultural settings and in organizations with different climates and technologies.

REFERENCES

- Adizes, I. Industrial Democracy: Yugoslav Style, N.Y.: Free Press, 1971.
- Argyris, C. Personality and Organization : The Conflict Between the System and the Individual, New York: Harper, 1964.
- Bachman, J. G., Bowers, D. G. and Marcus, P. M. Bases of Supervisory Power : A Comparative Study in Five Organizational Settings. In A. S. Tannenbaum (Ed.), Control in Organizations, New York: McGraw-Hill, 1968.
- Bachman, J. G., Smith, C. G. and Slesinger, J. A. Control, Performance and Satisfaction: An Analysis of Structural and Individual Effects. Journal of Personality and Social Psychology, 1966, 4, 127-136.
- Bancroft, T. A. Topics in Intermediate Statistical Methods. Ames: Iowa University Press, 1968.
- Bennis, W. G. Changing Organizations, New York: McGraw-Hill, 1966.
- Blais, A. Power and Causality, Quality and Quantity, 1974, 8, 45-64.
- Blake, R. R. and Mouton, J. S. The Managerial Grid, Houston: Gulf, 1964.
- Bowers, D. G. Organizational Control in an Insurance Company. Sociometry, 1964, 27, 230-244.
- Brayfield, A. H. and Rothe, H. F. An Index of job satisfaction. Journal of Applied Psychology, 1951, 35, 307-311.
- Buchanan, B. II. Building Organizational Commitment: The socialization of managers in work organizations. Administrative Science Quarterly, 1974, 19, 533-546.
- Burns and Stalker, G.M. The Management of Innovation. London: Tavistock Publications, 1961.
- Child, J. Managerial and Organizational factors associated with company performance - part II, Journal of Management Studies, 1975, 12, 12-27.

- Coch, L. and French, J. R. P. Overcoming resistance to change. Human Relations, 1948, 1, 512-533.
- Cooke, R. A. and Tannenbaum, A. S. Control and Participation in Community Colleges. A report on a research project funded by the National Institute of Education, Ann Arbor: Institute of Social Research, 1976.
- Cronbach, L. J. Coefficient alpha and the internal structure of tests. Psychometrika, 1951, 16, 297-334.
- Crozier, M. The Bureaucratic Phenomenon, Chicago: University of Chicago Press, 1964.
- Dahl, R. The concept of Power, Behavioural Science, 1957, 2, 201-218.
- Davis, B. Some thoughts on organizational democracy, Journal of Management Studies, 1967, 4, 270-281.
- Deutsch, M. The effect of motivational orientation upon trust and suspicion, Human Relations, 1960, 13, 123-140.
- Duncan, R. B. Multiple decision making structure in adapting to environmental uncertainty: the impact on organizational effectiveness, Human Relations, 1973, 26, 273-291.
- Emery, F. E. and Trist, E. L. The causal texture of organizational environment. In F. E. Emery (Ed.) Systems Thinking. Baltimore: Penguin Books, 1969.
- Etzioni, A. W. Two approaches to organizational Analysis: A critique and a suggestion. Administrative Science Quarterly, 1960, 5, 257-278.
- Etzioni, A. W. A comparative analysis of complex organizations, New York, Free Press, 1961.
- Evan, W. M. Indices of hierarchical structure of industrial organizations. Management Science, 1963, 9, 468-477.
- Filley, A. C. and Grimes, A. J. The Bases of Power in Decision Processes', Proceedings of the 27th Annual Convention of the Academy of Management, 1967, 133-160.
- French, J.R.P. Morrison, H. W. and Levinger, G. 'Coercive power and Forces Affecting Conformity', Journal of Abnormal and Social Psychology, 1960, 61, 93-101.

- French, J. R. P. and Raven, B. 'The Bases of Social Power'
In D. Cartwright (Ed.), Studies in Social Power.
Ann Arbor, MI: Institute for Social Research, 1959.
- Friedlander, F. and Brown, L.D. Organization Development,
Annual Review of Psychology, 1974, 25, 313-341.
- Friedlander, F. and Pickle, H. Components of effectiveness
in small organizations. Administrative Science Quarterly,
1968, 13, 289-304.
- Gamson, W. A. Power and Discontent, Homewood, IL: Dorsey,
1968.
- Georgopolous, B. S. and Tannenbaum, A. S. The study of
organizational effectiveness. American Sociological
Review, 1957, 22, 534-540.
- Gilman, G., 'An Inquiry into the Nature and Uses of Authority',
In Mason Haire (Ed), Organizational Theory and Industrial
Practice, New York: Wiley, 1962.
- Gulick, L. and Urwick, L. (Eds), Papers on Science of
Administration, New York: Institute of Public Administration,
1937.
- Gundelach, P. and Tetzschner, H. Measurement of influence
in organizations - critique of the control-graph method.
Acta Sociologica, 1976, 19, 49-63.
- Haire, M., Ghiselli, E. and Porter L. W. Managerial Thinking:
An International Study, N.Y.: Wiley, 1966.
- Hall, R. H. Organizations : Structure and Processes.
New Jersey: Prentice-Hall, 1972.
- Hanna, N. Organizational Variables and Innovativeness in
Collegiate Nursing Institutions: A comparative study.
Unpublished Doctoral dissertation, The University of
Michigan, 1972.
- Heller, F. A. Managerial Decision Making: A Study of
Leadership Styles and Power Sharing Among Senior
Managers, London: Tavistock, 1971.
- Heller, F. A., Derenth, P. J., Koopman, P. and Rus, V.
A longitudinal study in participative decision making.
Human Relations, 1977, 30, 567-587.

- Hickson, D. O., Hinings, C., Lee, C., Schneck, R. and Pennings, J. 'A strategic contingency theory of intra-organizational Power', Administrative Science Quarterly, 1971, 16, 216-229.
- Hofstede, G. Measuring Hierarchical Power Distance in Thirty-Seven Countries, Working paper 76-32. European Institute for Advanced Studies in Management, Brussels, July 1976.
- Hrebiniak, L. G. and Alutto, J. A. Personal and role-related factors in the development of organizational commitment. Administrative Science Quarterly, 1972, 17, 555-572.
- Jacques, E. Measurement of Responsibility, Cambridge, Mass: Harvard, 1956.
- Juralewicz, R.S. An experiment on participation in a Latin American factory. Human Relations, 1974, 27, 627-637.
- Katz, D. and Kahn, R. L. The Social Psychology of Organizations, New York: Wiley, 1966.
- Kavcic. Distribution of influence on industrial and mining Companies of Slovenia, Center for Public Opinion Research, Slovenian Central Trade Union Organization, Ljubljana, 1968.
- Kelly, G. A. The Psychology of Personal Constructs, New York: Norton, 1955.
- Kipnis, D. and Cosentino, J. 'Use of Leadership Powers in Industry', Journal of Applied Psychology, 1969, 53, 460-466.
- Kumar, U. The successful executive: a study of the Indian managers in an industrial organization, Interpersonal Development, 1970, 1, 39-47.
- Kumar, U. and Singh, K.K. The interpersonal construct system of Indian managers: a determinant of organizational behaviour. Management International Review, 1978, 18(1), 49-60.
- Lawler, E. E. and Hackman, R. J. Impact of employee participation in the development of pay incentive plans: a field experiment, Journal of Applied Psychology, 1969, 53, 467-571.

- Lawrence, P. R. and Lorsch, J. W. Organization and Environment, Homewood, Ill: Irwin, 1969.
- Leavitt, H. Unhuman Organization, Harvard Business Review, 1962, July-August, 90-98.
- Leavitt, H. Applied organizational change in industry: structural, technological and humanistic approaches, In J. March (Ed), Handbook of Organizations, Chicago: Rand Mc Nally, 1965.
- Likert, R. The Human Organization, New York: McGraw-Hill, 1967.
- Likert, R. and Bowers, D. G. Organizational theory and human resource accounting, American Psychologist, 1969, 24, 585-592.
- Lischeron, J. A. and Wall, T. D. Employee participation: an experimental field study, Human Relations, 1975, 28, 863-884.
- Lodahl, T. M. and Kejner, M. The definition and measurement of job involvement, Journal of Applied Psychology, 1965, 49, 24-33.
- Lord, R. G. Functional Leadership Behaviour: Measurement and Relation to Social Power and Leadership Perceptions, Administrative Science Quarterly, 1977, 22, 114-133.
- Lowin, A. Participative decision making: a model, literature, critique and prescription for research. Organizational Behaviour and Human Performance, 1968, 3, 68-106.
- Mahoney, T. and Wietzel, W. Managerial models of organizational effectiveness. Administrative Science Quarterly, 1969, 14, 357-365.
- Malavia, P. Perception of participation in departmental decision making: its relation with job satisfaction, job effectiveness, and personality factors. Indian Journal of Industrial Relations, 1977, 12, 429-443.
- March, J. G. and Simon, H. A., Organizations, New York: Wiley, 1958.
- McAfee, S. R. W. Organizational variables affecting curriculum innovation in selected black colleges and universities: a comparative study, Unpublished doctoral dissertation, The University of Michigan, 1974.

- McGregor, D. The Human Side of Enterprise. New York: McGraw-Hill, 1960.
- McMahon, J. T. Participative and Power Equalized Organizational systems: an empirical investigation and theoretical integration. Human Relations, 1976, 29, 203-215.
- McMahon, J. T. and Ivancevich, J. M. A study of control in a manufacturing organization: managers and nonmanagers. Administrative Science Quarterly, 1976, 21, 66-83.
- McMahon, J. T. and Perritt, G. W. Towards a contingency theory of organizational control. Academy of Management Journal, Vol. 16, No. 4, 1973, pp 624-635.
- Nelms, S. Decision Making and Productivity, Oxford: Blackwell, 1958.
- Miles, R. E. Human relations or human resources? Harvard Business Review, July-August, 1965.
- Mohr, L.B. Authority and democracy in organizations, Human Relations, 1977, 30, 919-947.
- Mooney, J. D. The Principles of Organization, New York: Harper, 1947.
- Mott, P. E. The Characteristics of Effective Organizations. New York: Harper and Row, 1972.
- Mowday, R. T. An Exploratory Study of the Exercise of Influence in Organizations. Unpublished doctoral dissertation, Graduate School of Administration, University of California, Irvine, 1975.
- Mowday, R. T. The exercise of upward influence in organizations. Administrative Science Quarterly, 1978, 23, 137-156.
- Mozina, S. J., Tannenbaum, A. S. and Likert, R. Testing a management style, European Business, 1970, 27, 60-68.
- Mulder, M. Reduction of Power Differences in Practice: The Power Distance Reduction Theory and its Applications. In G. Hofstede and M. S. Kassem (Eds.), European Contributions to Organization Theory, Assen/Amsterdam, Van Gorcum, 1976.
- Negandhi, A. R. and Reimann, B. C. Task environment, decentralization and organizational effectiveness. Human Relations, 1973, 26, 203-214.

- Patchen, M. Alternative questionnaire approaches to the measurement of influence in organizations. American Journal of Sociology, 1963, 69, 41-52.
- Patchen, M. Participation, Achievement and Involvement in the Job, Englewood Cliffs: Prentice-Hall, 1970.
- Patchen, M. 'The Locus and Basis of Influence in Organizational Decisions', Organizational Behavior and Human Performance, 1974, 11, 195-221.
- Patchen, M., Seashore, S. E., and Eckerman, W. Some dealership characteristics related to change in new car sales volumes, Unpublished report, Ann Arbor: Institute of Social Research, 1961.
- Payne, R. L., Fineman, S., and Wall, T. D. Organizational Climate and job satisfaction: a conceptual synthesis. Organizational Behaviour and Human Performance, 1976, 16, 45-62.
- Pennings, J. M. Environment, structure, interdependence and their relevance for organizational effectiveness. Unpublished doctoral dissertation, The University of Michigan, 1973.
- Perrow, C. The analysis of goals in complex organizations. American Sociological Review, 1961, 26, 854-866.
- Perrow, C. Departmental Power and Perspective in Industrial Firms. In M. M. Zald (Ed.), Power in Organizations, Nashville, Tennessee: Vanderbilt University Press, 1970.
- Perrow, C. Complex Organizations: A Critical Essay. Glenview, Illinois: Scott, Foresman, 1972.
- Price, J. L. Organizational Effectiveness, an Inventory of Propositions, Homewood, Illinois, R. D. Irwin, 1968.
- Price, J. L. The study of organizational effectiveness. Sociological Quarterly, 1972, 13, 3-15.
- Raven, B. H. and Kruglanski, A. W. 'Conflict and Power', In Paul Swingle (Ed.), The Structure of Conflict. New York: Academic Press, 1970.
- Roethlisberger, F. J. and Dickson, W. J. Management and the Worker, Cambridge, Mass: Harvard University Press, 1939.

- Rosenthal, R. and Rosnow, R. L. Artifact in Behavioural Research. New York: Academic Press, 1969.
- Rosner, M. Self-management in kibbutz industry: organizational patterns and psychological effects. Participation and Self-management, 1973, 4, 103-22.
- Rotter, J. B. Generalized expectancies for interpersonal trust. American Psychologist, 1971, 26, 443-452.
- Runyon, K. E. Some interactions between personality variables and management styles. Journal of Applied Psychology, 1973, 57, 288-294.
- Salanick, G. R. and Pfeffer, J. The Basis and use of Power in Organizational Decision Making: The Case of a University. Administrative Science Quarterly, 1974, 19, 453-473.
- Salanick, G. R. and Pfeffer, J. Who gets power -- and how they hold on to it : a strategic contingency model of power. Organizational Dynamics. 1977, 5, 3-21.
- Schneider, B., Hall, D. T., Nygren, H. T. Self-image and job characteristics as correlates of changing organizational identification. Human Relations, 1971, 24, 397-416.
- Shepard, H. 'Changing Interpersonal and Intergroup Relationships in Organizations', In James March (Ed.), Handbook of Organizations, Chicago: Rand McNally, 1965.
- Shetty, Y. K. Managerial power and organizational effectiveness: a contingency analysis. Journal of Management Studies, 1978, 15, 176-186.
- Smith, C. G. and Tannenbaum, A. S. Organizational Control Structure: A Comparative Analysis, Human Relations, 1963, 16, 299-316.
- Sorensen, P. F. Jr. Control and effectiveness in twenty-seven Scandinavian voluntary organizations. The Journal of Management Studies, 1976, 13, 183-188.
- Steers, R. M. Problems in the measurement of organizational effectiveness. Administrative Science Quarterly, 1975, 20, 546-558.
- Strauss, G. Some Notes on Power Equalization, In H. Leavitt (Ed.), The Social Science of Organizations, New York: Prentice-Hall, 1963.

- Tannenbaum, A. S. Control and Effectiveness in a Voluntary Organization, American Journal of Sociology, 1961, 67, 33-46.
- Tannenbaum, A. S. Control in Organizations, New York: McGraw Hill, 1968.
- Tannenbaum, A. S. and Cooke, R. A. Organizational Control : A review of studies employing the control Graph Method, A paper presented at the IAAP Congress, Munich, 1978.
- Tannenbaum, A. S. and Kahn, R. L. Organizational Control Structure, Human Relations, 1957, 10, 127-140.
- Tannenbaum, A. S., Rank, Clout and Worker Satisfaction : Pecking Order, Capitalist and Communist Style. Psychology Today, 1975, September, 41-43.
- Taylor, F. W. The Principles of Scientific Management, New York: Harper, 1923.
- Tedeschi, J. T., Schlenker, B. R. and Linkskold, S., 'The Exercise of Power and Influence: The source of Influence, in J. T. Tedeschi (Ed.), The Social Influence Processes, 1972.
- Urwick, L. The Elements of Administration, New York: Harper, 1944.
- Vroom, V. Some personality determinants of the effects of participation. Journal of Abnormal and Social Psychology, 1959, 59, 322-327.
- Weber, M. The Theory of Social and Economic Organizations. Oxford: Oxford University Press, 1947.
- Whisler, T. L., Meyer, H., Baum, B. H. and Sorensen, P. F., Centralization of Organizational Control: An Empirical Study of its Meaning and Measurement. Journal of Business, 1967, 40, 10-26.
- Yuchtman, E. Control in an Insurance Company: Cause or Effect. In Arnold S. Tannenbaum (Ed.), Control in Organizations, New York: McGraw-Hill, 1968.
- Yuchtman, E. and Seashore, B. E. A system resource approach to organizational effectiveness, American Sociological Review, 1967, 32, 891-903.

Zald, M. M. Power in Organizations, Nashville, Tennessee:
Vanderbilt University Press, 1970.

Zupanov, J. and Tannenbaum, A. S. The Distribution of
Control in Some Yugoslav Industrial Organizations as
Perceived by Members, In A. S. Tannenbaum (Ed.),
Control in Organizations, New York: McGraw-Hill, 1968.

A P P E N D I C E S

INDIAN INSTITUTE OF TECHNOLOGY KANPUR
Department of Humanities and Social Sciences

SURVEY RESEARCH QUESTIONNAIRE

Your cooperation is solicited in helping us conduct this research on organizations. We are interested in personnel's reactions to his work and organization. Your responses will help us answer the questions that we have raised for this research. There are no right or wrong answers. Only your views expressed honestly are of concern to us. In order to answer the questions, please follow the instructions given separately for each questionnaire.

This research survey is purely of academic interest. The information obtained from you will be kept strictly confidential and will be used for research purposes. Your name is required for identification purpose only. The anonymity of your responses will be maintained by replacing the name by a code number later.

Organization _____

Date _____ Place _____

Background data

Name _____ Age _____

Educational qualification _____ (last degree obtained)

General _____

Technical _____

Any other _____

Years of service in the present organization _____

Total length of service in work organization _____

Position or rank at the time of entry _____

Position or rank held now _____

Name of your Section _____

Name of your Subunit _____

Name of your Unit _____

Appendix 1

Power Distribution Questionnaire

The following questions attempt to measure descriptions of how people affect the functioning of a department. We are basically interested in how much influence members of a department have at various levels. Your objective assessments of distribution of influence in your department are of importance to us. There is nothing right or wrong about your answers. Please respond to the questions given below by circling the number which most fits your answer on the scale mentioned against each. The scale represents the following categories:

Great deal	Considerable	Adequate	Little	Hardly any
5	4	3	2	1

For example, if your Departmental Head has a great deal of influence, circle '5', if adequate, circle '3', or if he has hardly any influence, circle '1'.

1. How much say or influence does your Departmental Head have on each of the following activities?

	Great deal	Consi- derable	Ade- quate	Little	Hardly any
a. What goes on in your department?	5	4	3	2	1
b. Planning of departmental work.	5	4	3	2	1
c. Evaluation of overall performance of your department.	5	4	3	2	1

2. How much say or influence does the Deputy Departmental Head or its equivalent in your department have on each of the following activities?

	Hardly any	Little	Ade- quate	Consi- derable	Great deal
a. What goes on in your department?	1	2	3	4	5
b. Planning of departmental work.	1	2	3	4	5
c. Evaluation of overall performance of your department.	1	2	3	4	5

3. How much say or influence does the Supervisor or its equivalent have in your department on each of the following activities?

	Great deal	Consi- derable	Ade- quate	Little	Hardly any
a. What goes on in your department?	5	4	3	2	1
b. Planning of departmental work.	5	4	3	2	1
c. Evaluation of overall performance of your department.	5	4	3	2	1

APPENDIX 2

Power Expectation Questionnaire

The following questions attempt to measure the degree to which you expect managers to influence functioning of the department. Here, we are interested in finding out how much say or influence do you expect the members of your department to have on various departmental activities. There are no right or wrong answers. It is your expectations of how much influence should they have is of importance to us. Please give your answers to the questions given below by circling the number which most fits your answer on the scale mentioned against each. The scale represents the following categories:

Great deal	Considerable	Adequate	Little	Hardly any
5	4	3	2	1

For example, if you expect your departmental head to have a great deal of influence, circle '5', if adequate influence, circle '3', or if hardly any influence, circle '1'.

1. How much say or influence, do you expect, the Departmental Head should have on the following activities?

	Hardly any	Little	Ade- quate	Consi- derable	Great deal
a. What goes on in your department?	1	2	3	4	5
b. Planning of departmental work.	1	2	3	4	5
c. Evaluation of overall performance of your department.	1	2	3	4	5

2. How much say or influence, do you expect, the Deputy Department Head or its equivalent should have on the following activities?

	Great deal	Consi-derable	Ade-quate	Little	Hardly any
a. What goes on in your department?	5	4	3	2	1
b. Planning of departmental work.	5	4	3	2	1
c. Evaluation of overall performance of your department.	5	4	3	2	1

3. How much say or influence, do you expect, the Supervisor or its equivalent should have on the following activities?

	Hardly any	Little	Ade-quate	Consi-derable	Great deal
a. What goes on in your department?	1	2	3	4	5
b. Planning of departmental work.	1	2	3	4	5
c. Evaluation of overall performance of your department.	1	2	3	4	5

Appendix 3

Bases of Power Utilization Questionnaire

The following statements attempt to measure the bases of influence exercised in organizations. The bases of superior's influence may depend upon the use of position, the expertise and the personal likeability.

Please give your responses on the following statements by circling the number which most fits your views on the scale mentioned against each. There are no right or wrong answers. You are required to show how correctly each of these statements describe your organization. The scale represents the following categories:

Almost always true (AAT)	Very often true (VOT)	Occasionally true (OT)	Sometimes true (ST)	Rarely true (RT)
5	4	3	2	1

For example, if the statement is almost always true for your organization, circle '5', if it is rarely true, circle '1', and if it is occasionally true, circle '3'.

	AAT	VOT	OT	ST	RT
1. Recommendation of the superior is necessary before any reward is given.	5	4	3	2	1
2. In day-to-day activities of my department, it is the general competence and ability of the superior which influences the subordinates.	5	4	3	2	1

	AA T	VO T	OT	ST	RT
3. Subordinates fear because the superiors can write confidential reports.	5	4	3	2	1
4. The members in my department generally think of their bosses as good persons.	5	4	3	2	1
5. It is the ability and expertise of superiors which counts above all in day-to-day functioning of the department.	5	4	3	2	1
6. Rules and regulations are often cited as a means of expressing authority to members.	5	4	3	2	1
7. The only way a superior can function in my department is through rule compliance from the subordinates.	5	4	3	2	1
8. It is the superiors with most knowledge and skill whose influences are widely respected in the department.	5	4	3	2	1
9. In day-to-day functioning of the department, good relationship is the first consideration to seek obedience from the subordinates.	5	4	3	2	1
10. In day-to-day functioning of the department, the superiors who set examples for others are generally obeyed by the subordinates.	5	4	3	2	1
11. It is the possession of technical skills and experience of the superiors which influences the subordinates.	5	4	3	2	1
12. The most liked person in my department is also the person most obeyed	5	4	3	2	1

Appendix 4a

Organizational Identification Subscale

To what extent do you agree or disagree with the following statements about your organization. Please give your responses by circling the number which most fits your views on the scale mentioned against each. The scale represents the following categories:

Strongly agree (SA)	Agree (A)	Undecided (UD)	Disagree (DA)	Strongly disagree (SDA)
5	4	3	2	1

For example, if you strongly agree or strongly disagree with the statement, circle '5' or '1', respectively. If you simply agree or disagree with it but not strong, circle '4' or '2', respectively. If you partially agree and partially disagree, circle '3'.

	SA	A	UD	DA	SDA
1. I feel that this organization is a large family in which employees have a sense of belonging.	5	4	3	2	1
2. I feel a sense of pride in working in this organization.	5	4	3	2	1
3. I feel that the organization's problems are my own.	5	4	3	2	1
4. I feel that the organizational goal-achievement is the fulfillment of my personal goals.	5	4	3	2	1

Appendix 4b

Job Involvement Subscale

To what extent do you agree or disagree with the following statement about your work. Please give your responses by circling the number which most fits your views on the scale mentioned against each. The scale represents the following categories:

Strongly agree (SA)	Agree (A)	Undecided (UD)	Disagree (DA)	Strongly disagree (SDA)
5	4	3	2	1

For example, if you strongly agree or strongly disagree with the statement, circle '5' or '1', respectively. If you simply agree or disagree, but not strongly, circle '4' or '2' respectively. If you partially agree and partially disagree with the statement circle '3'.

	SDA	DA	UD	A	SA
1. To me, my work is only a part of who I am.	1	2	3	4	5
2. I have other activities more important than my work.	1	2	3	4	5
3. I avoid taking on extra-duties and responsibilities in my work.	1	2	3	4	5
4. The most important things that happen to me, involve my job.	1	2	3	4	5
5. Many things in life are more important than my work.	1	2	3	4	5
6. I am very much personally involved in my job.	1	2	3	4	5

APPENDIX 4c

Organizational Loyalty Subscale

To what extent do you agree or disagree with the following statements. Please give your responses by circling the number which most fits your views on the scale mentioned against each. The scale represents the following categories:

Strongly agree (SA)	Agree (A)	Undecided (UD)	Disagree (DA)	Strongly Disagree (SDA)
5	4	3	2	1

For example, if you strongly agree or strongly disagree with the statement, circle '5' or '1', respectively. If you simply agree or disagree with it, but not strongly, circle '4' or '2', respectively. If you partially agree and partially disagree with it, circle '3'.

	SA	A	UD	DA	SDA
1. I owe a lot to the organization for what it has done to me.	5	4	3	2	1
2. I try to defend my organization when people criticise it.	5	4	3	2	1
3. I have cast my lot with the organization no matter what future it has.	5	4	3	2	1
4. I am careful not to do anything that may bring bad name to the organization.	5	4	3	2	1

Appendix 4a

Subunit Cooperation Subscale

Please respond to the question 'How much cooperation usually exists among the members of your department' on the activities mentioned below? Give your answers by circling the number which most fits your views on the scale mentioned against each. The scale represents the following categories:

Great deal	Considerable	Adequate	Little	Hardly any
5	4	3	2	1

For example, if you feel that there exists a great deal of cooperation in your department, circle '5', if there is hardly any, circle '1', and if it is adequate, circle '3'.

	Hardly any	Little	Ade- quate	Consi- derable	Great deal
1. Give and take of information	1	2	3	4	5
2. Borrowing materials, equipment, etc.	1	2	3	4	5
3. Sharing of technical know-how.	1	2	3	4	5
4. Doing extra hours of work to replace a person on leave.	1	2	3	4	5
5. Helping solve each other's problems.	1	2	3	4	5
6. Overall helpfulness in work.	1	2	3	4	5

Appendix 4e

Trust-in-Organization Subscale

The following statements attempt to measure your reactions to various aspects of functioning of organization. You are required to show how correctly these statements describe your organization. Please give your responses by circling the number which most fits your views on the scale mentioned against each. The scale represents the following categories:

Almost always true (AAT)	Very often true (VOT)	Occasionally true (OT)	sometimes true (ST)	Rarely true (RT)
5	4	3	2	1

For example, if you feel that the statement is almost always true for your organization, circle '5'; if it is rarely true, circle '1' and if it is occasionally true, circle '3'.

	RT	ST	OT	VOT	AAT
1. Most people in this organization can be counted on to do what they say they will do.	1	2	3	4	5
2. Lot of things are carried on informally with written communications coming later.	1	2	3	4	5
3. Superiors consider their subordinates trustworthy when they share important information.	1	2	3	4	5
4. Superiors can usually be relied upon to keep their promises.	1	2	3	4	5
5. The management usually honours its assurances.	1	2	3	4	5

Appendix 4f

Job Satisfaction Subscale

The following statements attempt to measure employees' reactions to their jobs. You are required to show how truly each of these statements describe your job. There are no right or wrong answers. It is what you feel is of importance to us. Please give your responses by circling the number which most fits your views. The scale represents the following categories:

Almost always true (AAT)	Very often true (VOT)	Occasionally true (OT)	Sometimes true (ST)	Rarely true (RT)
5	4	3	2	1

For example, if you feel that the statement is almost always true for your job, circle '5'. If it is rarely true, circle '1'. If it is occasionally true, circle '3'.

	AAT	VOT	OT	ST	RT
1. My job is like a hobby to me.	5	4	3	2	1
2. It seems that my friends are more interested in their jobs than I am.	5	4	3	2	1
3. I enjoy my work more than my leisure time.	5	4	3	2	1
4. I am satisfied with my job for the time being.	5	4	3	2	1
5. Most days I am enthusiastic about my work.	5	4	3	2	1
6. I like my job better than the average worker does.	5	4	3	2	1
7. I find real enjoyment in my work.	5	4	3	2	1

Appendix 4g

Communication Adequacy Subscale

The following statements are intended to measure the way people communicate in your department. Please respond to the statements by circling the number which most fits your views on the scale mentioned against each. The scale represents the following categories:

Strongly agree (SA)	Agree (A)	Undecided (UD)	Disagree (DA)	Strongly disagree (SLA)
5	4	3	2	1

For example, if you strongly agree with the statement, circle '5', if you strongly disagree with the statement, circle '1', and if you partially agree and partially disagree with the statement, circle '3'.

	SA	A	UD	DA	SLA
1. The information given by my subordinates is accurate.	5	4	3	2	1
2. Superiors expect some views from subordinates after information is passed on to them.	5	4	3	2	1
3. I cannot use all the information that keeps coming to me.	5	4	3	2	1
4. People do not provide all the information needed for making decisions.	5	4	3	2	1

Appendix 5

SUBUNIT PERFORMANCE RATING SCALE

In the following questions, we intend to measure the performance of various departments of your organization. We are basically interested in the performance ratings of various departments by the members of top management as independent observers. Your assessments of the quality and quantity of work of various departments is of importance to us. Please try to be objective in your assessments as far as possible.

Please respond to the question "What is the quality of work in each of the following departments of your organization?" Kindly give your assessments on the 5-point scale mentioned against each department by circling the number which most fits your view. The scale represents the following categories:

<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>Bad</u>	<u>Poor</u>
5	4	3	2	1

For example, if you think that the quality of work in a particular department is excellent circle '5', if it is fair circle '3', or if it is poor circle '1'.

Quality of work :

	<u>Excellent</u>	<u>Good</u>	<u>Fair</u>	<u>Bad</u>	<u>Poor</u>
Organization 1					
1. Polymerisation	5	4	3	2	1
2. Spinning	5	4	3	2	1
3. Stretching	5	4	3	2	1
4. Texturising	5	4	3	2	1
5. Dyeing	5	4	3	2	1
6. Coning	5	4	3	2	1
7. Textile Maintenance	5	4	3	2	1

Organization 2

8. Wool Combing	5	4	3	2	1
9. Spinning	5	4	3	2	1
10. Weaving	5	4	3	2	1
11. Finishing	5	4	3	2	1
12. Fabric Dyeing	5	4	3	2	1

Please respond to the question "What is the quantity of work in each of the following departments of your organization?" Kindly give your assessments on the 5-point scale mentioned against each department by circling the number which most fits your view. The scale represents the following categories:

<u>Great deal</u>	<u>Considerable</u>	<u>Adequate</u>	<u>Little</u>	<u>Very Little</u>
5	4	3	2	1

For example, if you think that the quantity of work in a particular department is great deal circle '5', if it is adequate circle '3', or if it is very little circle '1'.

Amount of work

<u>Great deal</u>	<u>Consi- derable</u>	<u>Ade- quate</u>	<u>Little</u>	<u>Very Little</u>
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Organization 1

1. Polymerization	5	4	3	2	1
2. Spinning	5	4	3	2	1
3. Stretching	5	4	3	2	1
4. Texturising	5	4	3	2	1
5. Dyeing	5	4	3	2	1
6. Coning	5	4	3	2	1
7. Textile Maintenance	5	4	3	2	1

Organization 2

8. Wool Combing	5	4	3	2	1
9. Spinning	5	4	3	2	1
10. Weaving	5	4	3	2	1
11. Finishing	5	4	3	2	1
12. Fabric Dyeing	5	4	3	2	1